SCREENING SITE INSPECTION REPORT

VALLEY PARK SCHOOL
4510 BAWELL STREET
BATON ROUGE, LOUISIANA 70808
(LAD985170273)

VOLUME 1 OF 3

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The Louisiana Department of Environmental Quality
Inactive and Abandoned Sites Division

LAD.985170273

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VALLEY PARK SCHOOL

BATON ROUGE, LOUISIANA

1. INTRODUCTION

The U.S. Environmental Protection Agency (EPA) has tasked the Louisiana Department of Environmental Quality (LDEQ), Inactive and Abandoned Sites Division (LDEQ) to develop a report for the screening site investigation (SSI) of the Valley Park School in Baton Rouge, Louisiana in East Baton Rouge Parish. The EPA Site Identification number for this site is LAD985170273. This investigation is performed under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA). The project is funded by the EPA/LDEQ Multi-site Grant.

1.1 Screening Site Investigation Objectives

The SSI evaluates the potential risks associated with hazardous waste generation, storage and disposal at the site. It expands upon data collected during the Preliminary Assessment (PA) and identifies data gaps. Information obtained during the SSI supports the management decision of whether the site qualifies for the Listing Site Inspection (LSI) or receives the classification of "Site Evaluation Accomplished (SEA)" under the Superfund Amendments and Reauthorization Act (SARA).

1.2 Site Description

The Valley Park School site, also called the Valley Park Landfill, hereinafter referred to as "the site," comprises approximately thirty-six (36) acres within the city limits of Baton Rouge, Louisiana in East Baton Rouge Parish. The geographic coordinates are: 30° 26′ 33" N. latitude and 91° 08′ 38" W. longitude. It is divided in half from east to west of the site by U.S. Interstate Highway 10.

The northern twenty-three acre section of the site is owned by the East Baton Rouge (EBRP) School Board and includes the Valley Park Administration Complex building, parking lots, basketball courts and two baseball fields. Approximately 300 personnel occupy the building on a full or part time basis. Also, adult and child students participate in learning and testing activities.

The East Baton Rouge Parish Recreation and Parks Commission and the Baton Rouge City-Parish separately own two parcels of land located in the southern portion of the site, totaling 13 acres. This area includes an indoor recreational center, three adjacent buildings, a baseball field, an adolescent playground area, and a large stockpile of dirt and rubble. Approximately 1500 people use the recreation center and approximately 300 people use the outdoor facilities on a monthly basis. The three buildings are occupied by twenty-seven City/Parish staff members (Ref. 1, 2 & 3).

1.3 Site Conditions

There is an estimated six- to eight- foot deep lift of garbage/fill material in the landfill. There is a two foot clay cap on the landfill in good condition. There are no containment structures at the site except a two foot clay cap. Garbage debris is apparent along the full length of the ditch bordering the east side of the site. The cap is in good condition with a healthy grass covering. Stressed vegetation was not detected. Leachate in four places along the east side of the site flows into the adjacent ditch. All building structures on the site appear in good condition. The parking lot at the Administration Building is in poor condition due to subsidence. Subsidence is the result of settling that occurs as loosely-packed wastes compress and decompose over time. The administration building has not and probably will not suffer from subsistence because the building foundation slab is anchored and supported by a hard Pleistocence clay (Ref 4).

1.4 Operating History

The Valley Park Landfill began using the site in the 1940's, first as a backup, then as the City-Parish's primary landfill from 1958 to 1963. No known records were maintained as to types or quantities of materials deposited at the site. It is assumed that the site contains primarily residential garbage from the Baton Rouge Community. There is no evidence that potentially hazardous wastes were or were not deposited at the site. Construction of the Interstate (I-10) dividing the site commenced in 1963 and was completed in 1965.

The East Baton Rouge Parish School Board initiated construction of the Valley Park School building in 1966 and it was completed in 1968. The building is supported by wooden pilings at a depth of fifteen feet into pleistocene clay. Valley Park operated as a junior high school from 1968 to 1973, then as a middle school until 1986, at which time it converted to an administrative, testing, and adult education center.

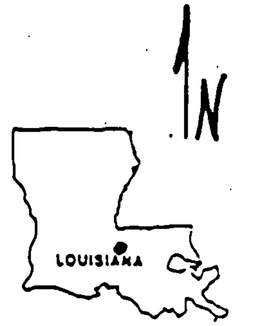
Residential construction occurred around the site primarily between 1941 and 1953, with an increase in density of housing from 1953 until 1959. Most buildings around the site are single or multiple family homes. There are also some apartment complexes, churches, and small businesses nearby.

1.5 Site Location Map

Louisiana Department of Environmental Quality

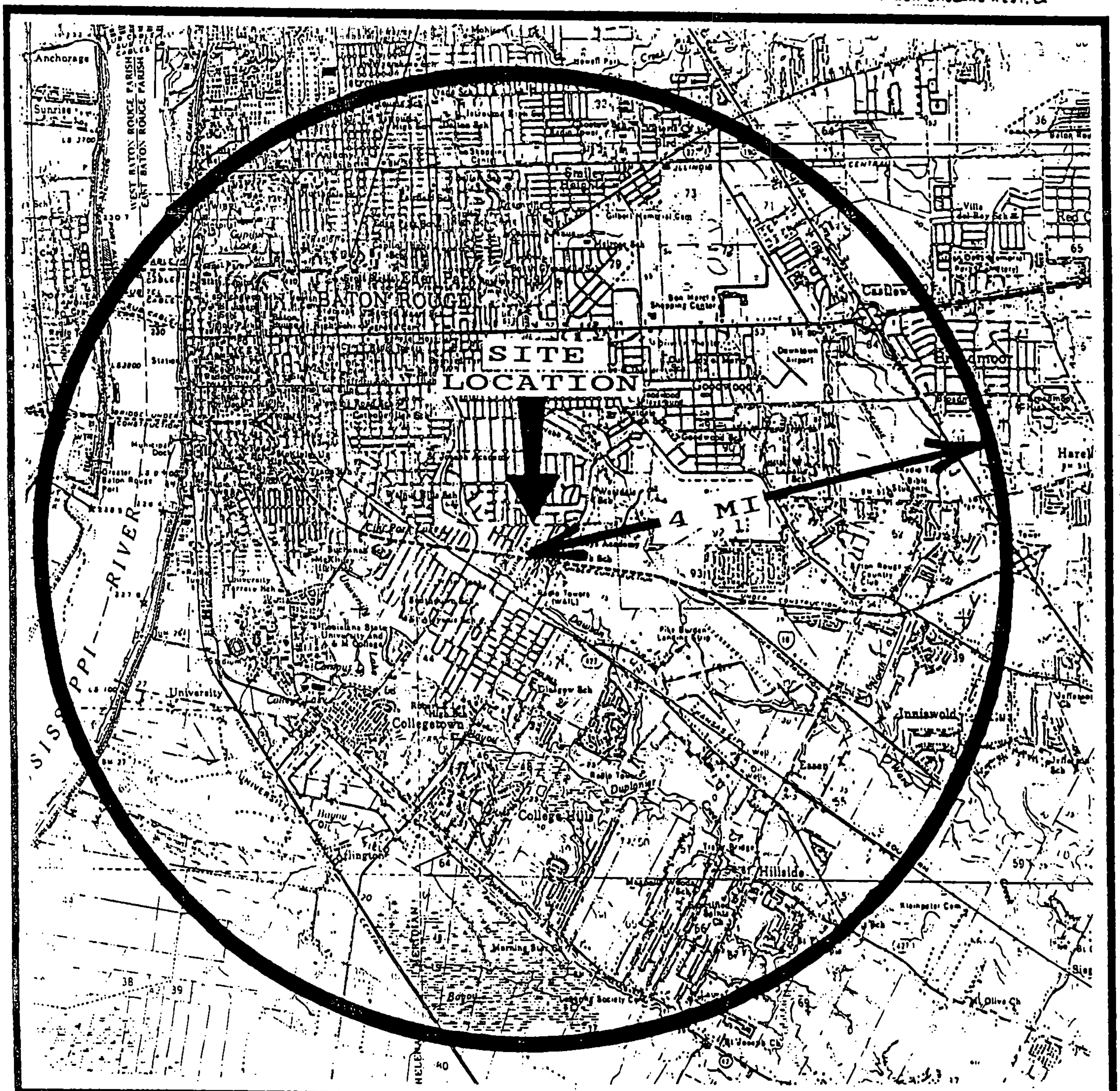
SITE LOCATION MAP

VALLEY PARK LANDFILL
BATON ROUGE, LA



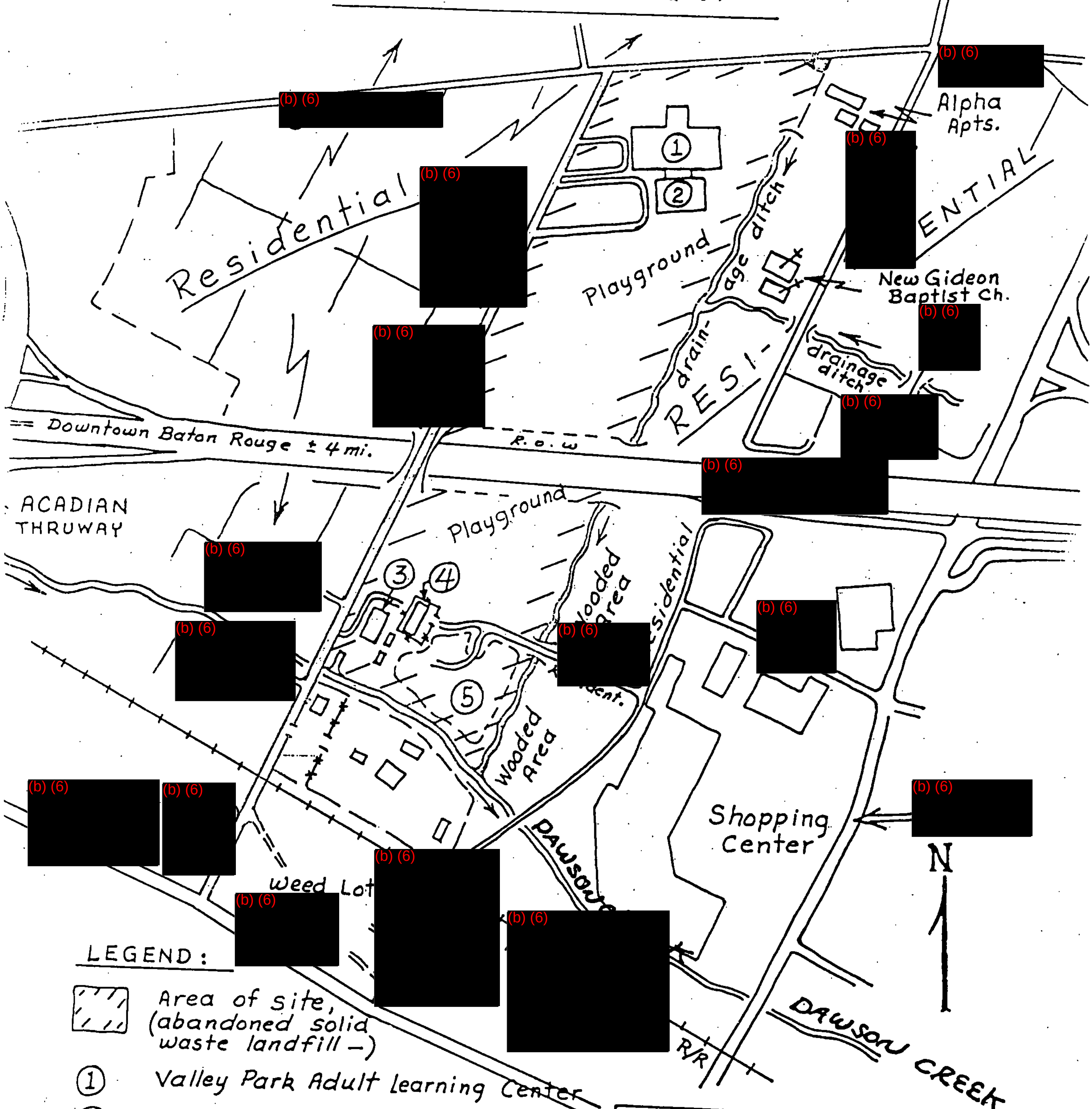
QUADRANGLE LOCATION
NEW ORLEANS EAST, LA
NEW ORLEANS WEST, LA

Scale: 1 inch = 1.25 miles



1.6 Location Plat and Aerial Photo

LOCATION PLAT



LEGEND:

Area of site, (abandoned solid waste landfill –)

① Valley Park Adult learning Center

② Valley Park Middle School

③ [redacted] Park (A BREC facility)

④ Dept. of Public Works, S. Maint. Lot

⑤ Dept. P.W., Stockpile excess dirt and broken concrete –

Note: Orig. Sz. of landfill = 40 ac. (Valley park area = 23 ac; [redacted] Pk. = 13 ac.; I-10 area = 4 ac. –)

LOCATION PLAT

Valley Park Elementary Site
(City of Baton Rouge, La., E. Baton Rouge Ph.)
Data taken from an Aerial Photo (La. DOTD 450-10-00, 749-29, taken 5-20-86) –

EBO/4-1-89 Scale: 1" = 505'

AERIAL PHOTO (05-20-86)

N

1.7 Summary of Previous Investigations

The PA completed by the LDEQ/IASD in August, 1989, revealed that three field investigations were previously conducted. A total of 27 priority pollutants in the form of volatile organics, semi-volatile organics, and heavy metals have been detected at locations on the site. These pollutants have the potential to come in direct contact with students, personnel, and the general public. Most detections of hazardous substances were from leachate from the landfill. The major concern is the proximity of the administration building and the public recreation center/playground to the covered landfill. Another concern is that no containment structures exist at the landfill site except for a two foot clay cap. Site surface drainage and leachate from the site poses potential for contamination of nearby surface water pathways. It was concluded that further information was necessary to more fully characterize the site (Ref. 5).

The following is a chronological summary of investigative events concerning the Valley Park Complex Building and/or landfill to date.

1981-The Louisiana Department of Natural Resources (DNR), Hazardous Waste Management Division collected shallow soil, water and sediment samples from the landfill site. There were no detections of hazardous constituents from the samples, but more extensive sampling was recommended (Ref. 6).

1982-The Louisiana State University submitted a preliminary environmental assessment of the landfill site which detailed a sampling event which resulted in detection of zinc at 300 ppm, cadmium at 16 ppm; lead at 1120 ppm and arsenic at 53.0 ppm (Ref. 7).

1982-Gulf South Institute prepared an investigative report for DNR. Samples collected at the Valley Park Landfill resulted in low levels of some metals only (Ref. 8).

1986-Cox, Walker and Associates, Inc., consulting Engineers were unsuccessful in attempting to collect air samples of the indoor air environment at Valley Park School. The inspector noted he detected no odors, damaged vegetation, or chemicals (Ref. 9).

1988-The EBRP School Board contracted Arch Consulting Services, Inc., to test the indoor air for formaldehyde from Valley Park School in rooms 100 and 104. Formaldehyde was not detected. It was determined that," the findings should not pose any significant problem for employees working in those areas" (Ref. 10).

1989-Arch Consulting Co., Inc., sampled ambient air in rooms no. 100 and no. 104, testing for formaldehyde, methane, carbon dioxide and carbon monoxide. Detections reported were within safe guidelines. Biological monitoring of the building was recommended (Ref. 11)

1989-The Maintenance Division of the EBRP School Board cleaned and re-installed all air conditioning coils in the Valley Park Complex building. Six floor drains were plugged with cement in an office area that had previously been a kitchen. These drains had not been in use for some time, therefore sewer gas was possibly emitted into the building.

1990-The EBRP School Board contracted West-Paine Laboratories to test the drinking water for metals, fluorides, nitrates, volatile organics, radiologicals and pesticides/herbicides. All detections were within acceptable levels (Ref. 12).

1991-In September, 1991, an employee representative at Valley Park submitted results of health concerns to Dr. Bernard Weiss, Superintendent of EBRP Schools. The report identified numerous health complaints including neurologic, upper respiratory, ocular, and dermatologic symptoms. Employee proposals included extensive ambient air sampling of the building interior and campus grounds, examination of the ventilation system, and other proposals.

1991-October 7th, 8th and 9th. LDEQ/IAS personnel collect thirty-two field samples in accordance with SSI work plan dated April 7, 1991 (Ref. 13).

1992-In February, the LDEQ/IAS Division submitted an investigation report of the Valley Park Administration Center building to Dr. Bernard Weiss of the EBRP School board. The investigation was jointly conducted with the Louisiana Office of Public Health Section of Environmental Epidemiology. Indoor ambient air was sampled and tested for non-methane hydrocarbons, all compounds on the Target Compound List, CO_2/O_2 concentrations, bacteria and fungi. No vapors were detected which could have originated from the previous landfill. Bacteria and Fungi were detected in the heating/air conditioning duct work. The general opinion was that the building had symptoms of sick building syndrome. Other findings were reported and other recommendations were made (Ref. 14).

2. DATA COLLECTION

2.1 On-Site Reconnaissance Inspection

Just prior to SSI sample collection in September 1991, a site reconnaissance inspection was made by Tom Mayhall of the LDEQ/IAS Division. Sampling locations were easily accessible. Leachate was flowing from the site into the adjacent ditch from three locations. Household Garbage coming from the landfill was apparent the full length of most of the bank of the adjacent ditch. The site was inspected on other occasions by the LDEQ/IAS Division. Other inspections were primarily follow-up to citizen complaints of either building related health concerns or leachate coming from the site.

The landfill is easily accessible to the general public. There are no natural or artificial barriers preventing accessibility. Chain-link fencing is present around the site on the northern section (North of I10), but it is not continuous. There are numerous entry points in this area. An indoor environmental investigation of the Administration building resulted in the conclusion that landfill vapors were not detected in the building. The health related problems were most probably from fungi and bacteria in the ventilation system and inadequate air flow distribution (Ref. 14).

The Maximum Exposed Individual (MEI) locations and target distance determinations were made. The Valley Park Administration building is situated on top of the old landfill. There are approximately 300 occupants that are in the building in a normal eight hour day Monday through Friday (Ref. 1, 2 & 3) Approximately 1500 use the recreation center and 300 people use the outdoor recreation facilities on a monthly basis. The site is situated in a heavily populated residential area. The target population estimate based on the 1990 Census from 0 to ¼ mile from the parameter of the site is 1,787 people (Ref 17). This figure does not include the number of people that use the site for recreation or occupants of buildings located on the site.

The landfill generally received household waste. It is not known if the site received industrial and/or commercial wastes. No records are available as to waste types. Nearby neighbors reported the site previously had an incinerator that burned garbage located just south of the Administration building. The site is not known to be underlain with a liner. The site is well drained with a three to five percent slope to the southeast. All surface drainage and leachate eventually flows into Dawson Creek.

On December 2, 1991, a public meeting was held at the Valley Park Complex building to determine health concerns in the building and area residents. The Louisiana Office of Public Health, Section of Environmental Epidemiology and the LDEQ/IASD held a public meeting December 2, 1991 at the Administration Building. The purpose of the meeting was to determine health related problems from occupants in the building and area residents. In response to reported health problems from employees of the Valley Park Administration building, LDEQ and the Office of Public Health (OPH), DHHR, undertook and indoor environmental investigation of the building. The objective of the investigation was to collect data which would define and help evaluate the indoor environment, locate potential sources of contamination, and evaluate the ventiliation system for the purpose of making recommendations for corrective action. This resulted into the Valley Park Administrative Center Investigative Report (Ref. 14).

2.2 Sampling Inspection

LDEQ/IASD staff conducted the sampling inspection on October 7, 8 and 9, 1991. On October 7 & 8, staff included Tom Mayhall (site safety officer and sampler), John Halk (team leader), Todd Thibodeaux (decontamination officer) and Kyle Moppert (sampler) of LDEQ/IASD and Thea Sloan (CLP Coordinator) with Ecology and Engineering (TAT). On October 9, Samples were collected by Tom Mayhall (team leader and site safety officer), Kyle Moppert (sampler) and Thea Sloan (CLP Coordinator). EPA tasked TAT team member Thea Sloan to tag, package, and ship samples in accordance with CLP criteria.

Sampling was needed to more fully characterize the site. Sample locations were chosen which would help determine if the site was posing a potential environmental and/or health threat. The locations were in accordance with the Valley Park School SSI Work Plan dated April 7, 1991 (Ref. 15). Locations were also chosen at previous sampling locations to qualify previous analytical results. The pathway of most concern was on-site exposure considering the high usage of the administration building and recreational facilities. Ground water and surface water pathways were also of concern because previous sampling of leachate indicated the presence of hazardous substances.

Nine (9) soil, seven (7) sediment, nine (9) surface water, One (1) rinsate and seven (7) ground water samples were collected, a total of thirty-three (33) samples. All sample containers were tagged, packaged and shipped according to Department of Transportation (DOT) requirements 49 CFR. Inorganic samples were shipped to Datachem laboratories and organic samples were shipped to Southwest Research Institute (Ref. 13)

2.3 Sampling Locations Table

SAMPLE #	MATRIX	LOCATION
Note: Refer to sample location Plat		
SS-1	SOIL	0-6" FROM A VACANT LOT BETWEEN 4581 AND 4615 BAWELL ST. 200 FT. N. OF STREET R. OF WAY
SS-2	SOIL	0-6" FROM N. SIDE OF BUILDING, 47' E. OF BUILDING, 12' S. OF SIDEWALK
SS-3	SOIL	0-6" IN LOW AREA 56' W. OF PAVED AREA IN LINE WITH CHAIN LINK FENCE AND 28' FROM CORNER OF BALL FIELD FENCE
SS-4	SOIL	0-6" FROM N. SIDE OF I-10 R. OF WAY IN 1' WIDE DRAINAGE 126' W. FROM SE FENCE CORNER AND 58' S. OF FENCE AND 8' N. OF LIGHT POLE
SS-5	SOIL	0-6" 95' N. OF I-10 CULVERT, 15' UP EMBANKMENT (SAME LOCATION AS SW-8)
SS-6	SOIL	FIELD DUPLICATE OF NO. SS-5
SS-7	SOIL	0-6" 427' N. OF NO. SW-8, 10' UP EMBANKMENT (SAME LOCATION AS SW-9)
SS-8	SOIL	0-6" IN LOW AREA 100' E. OF TWO WOODEN LIGHT POLES AND 64' S. OF FENCE
SS-9	SOIL	0-6" AT CHILDREN'S PLAYGROUND AREA 12' S. OF UTILITY POLE W/TRANSFORMER, 150' E. OF NAIRNE DR. BRIDGE
SW-1	SURFACE WATER	CENTER OF DAWSON CREEK 50' E. OF DRAINAGE DITCH OUTFALL AND 155' W. OF BALIS ST. BRIDGE
SW-2	SURFACE WATER	CENTER OF DAWSON CREEK 100' W. OF NAIRNE ST. BRIDGE
SW-3	SURFACE WATER	CENTER OF DRAINAGE DITCH 30' N. OF FERRET ST. BRIDGE
SW-4	SURFACE WATER	CENTER OF DRAINAGE DITCH 50' N. OF PAVED DRAINAGE DITCH
SW-5	SURFACE WATER	DISCHARGE WATER FROM CORRUGATED DRAIN (SURFACE WATER DRAINAGE)
SW-6	SURFACE WATER	EXTREME N. OF DRAINAGE DITCH DIRECTLY BELOW STORM WATER OUTFALL CENTER OF DRAINAGE DITCH

SAMPLE #	MATRIX	LOCATION

Note: Refer to sample location Plat

SW-7	SURFACE WATER	FIELD DUPLICATE OF SW-6
SW-8	SURFACE WATER	LEACHATE FROM 15' UP EMBANKMENT, 95' N. OF I-10 CULVERT (SAME LOCATION AS SS-5
SW-9	SURFACE WATER	LEACHATE FROM 10' UP EMBANKMENT , 427' N. OF SW-8
SW-10	WATER	RINSATE FROM DECONNING SAMPLING TOOLS
S-1	SEDIMENT	CENTER OF DAWSON CREEK 50' E. OF DRAINAGE DITCH OUTFALL AND 155' W. OF BALIS ST. BRIDGE (SAME LOCATION AS SW-1)
S-2	SEDIMENT	CENTER OF DAWSON CREEK 100' W. OF NAIRNE ST. BRIDGE
S-3	SEDIMENT	CENTER OF DRAINAGE DITCH 30' N. OF FERRET ST. BRIDGE
S-4	SEDIMENT	CENTER OF DRAINAGE DITCH 50' N. OF PAVED DRAINAGE DITCH INTERSECTION
S-5	SEDIMENT	CENTER OF DRAINAGE DITCH 1' FROM STORMWATER OUTFALL DRAIN AT BAWELL ST.
S-6	SEDIMENT	FIELD DUPLICATE OF S-5
S-7	SEDIMENT	COLLECTED DIRECTLY FROM DISCHARGE FROM CORRUGATED DRAIN PIPE LOCATED NEAR BASKETBALL COURT DRAINING INTO DRAINAGE DITCH
GW-1	GROUND WATER	LSU-FOOTBALL PRACTICE FIELD, WELL I. D. NO. 302439091103001
GW-2	GROUND WATER	FIELD DUPLICATE OF GW-1
GW-3	GROUND WATER	LSU-PUMP HOUSE AT ACADIAN DORM WELL I. D. NO. 302456091101
GW-4	GROUND WATER	LSU-ROSE GARDEN WELL NO. 302443091101
GW-5	GROUND WATER	LSU-PUMPHOUSE AT SYSTEMS BUILDING WELL I. D. NO. 302434091103001

SAMPLE #	MATRIX	LOCATION

Note: Refer to sample location Plat

GW-6	GROUND WATER	(b) (6) [redacted] RESIDENCE AT (b) (6) [redacted] NO. 302422091094
GW-7	GROUND WATER	(b) (6) [redacted] RESIDENCE AT (b) (6) [redacted] WELL I. D. NO. 302422091094 (BACKGROUND)

2.4 Sample I.D. Table

The following table details the station location number with the assigned Contract Lab Program (CLP) identification number.

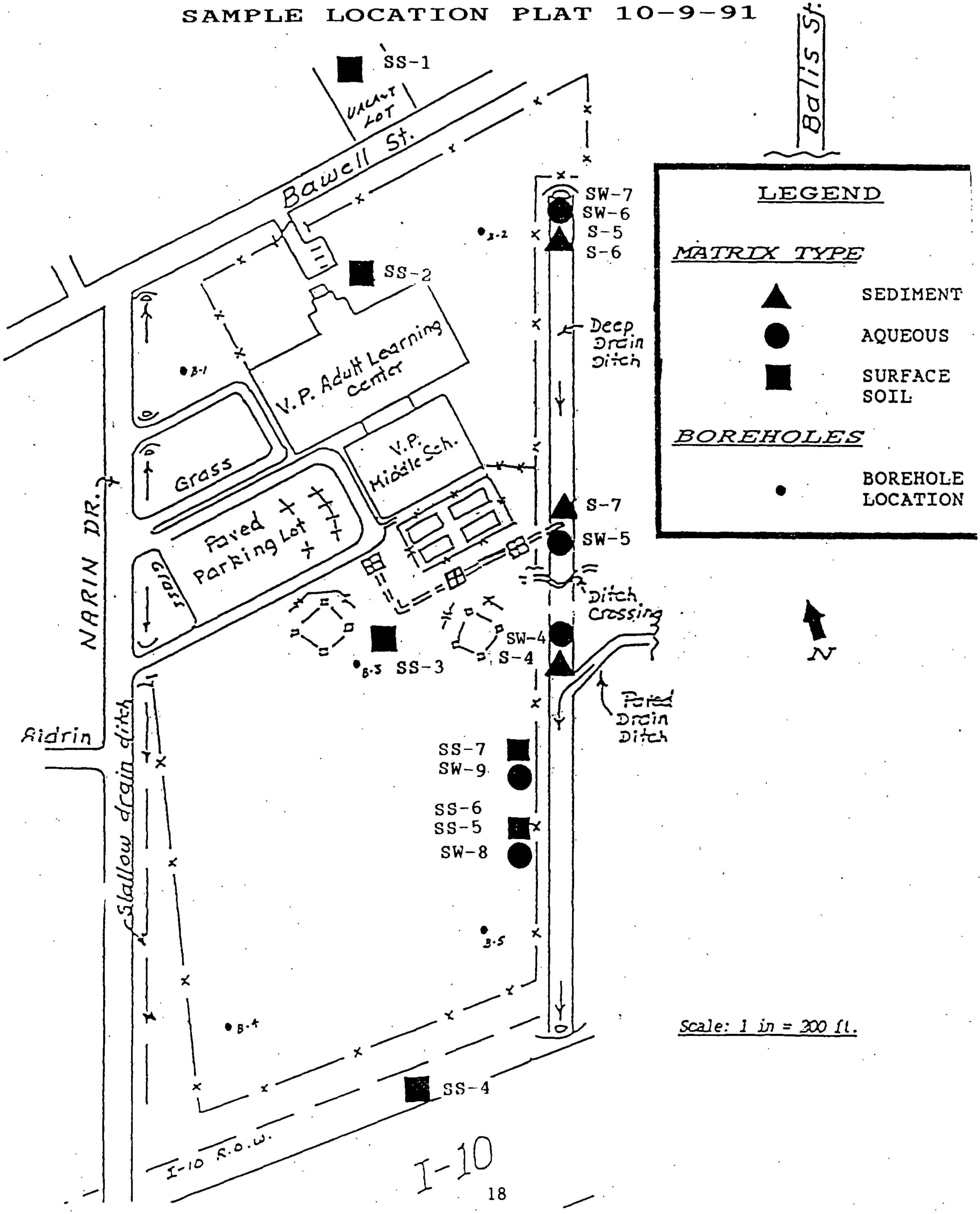
STATION LOC	CLP ORGANIC NO.	CLP INORGANIC NO.
SS-1	FT218	MFR618
SS-2	FT219	MFR619
SS-3	FT220	MFR620
SS-4	FT221	MFR621
SS-5	FT222	MFR622
SS-6	FT223	MFR623
SS-7	FT224	MFR624
SS-8	FT225	MFR625
SS-9	FT226	MFR626
SW-1	FT201	MFR601
SW-2	FT202	MFR602
SW-3	FT203	MFR603
SW-4	FT204	MFR604
SW-5	FT205	MFR605
SW-6	FT206	MFR606
SW-7	FT207	MFR607
SW-8	FT208	MFR608
SW-9	FT209	MFRS09
SW-10	FT217	MFR617
S-1	FT210	MFR610
S-2	FT211	MFR611
S-3	FT212	MFR612
S-4	FT213	MFR613
S-5	FT214	MFR614

STATION LOC	CLP ORGANIC NO.	CLP INORGANIC NO.
S-6	FT215	MFR615
S-7	FT216	MFR616
GW-1	FT227	MFR627
GW-2	FT228	MFR628
GW-3	FT229	MFR629
GW-4	FT230	MFR630
GW-5	FT232	MFR632
GW-6	FT231	MFR631
GW-7	FT233	MFR633

2.5 Sample Location Plat (Northern Section)

VALLEY PARK SCHOOL (SSI)

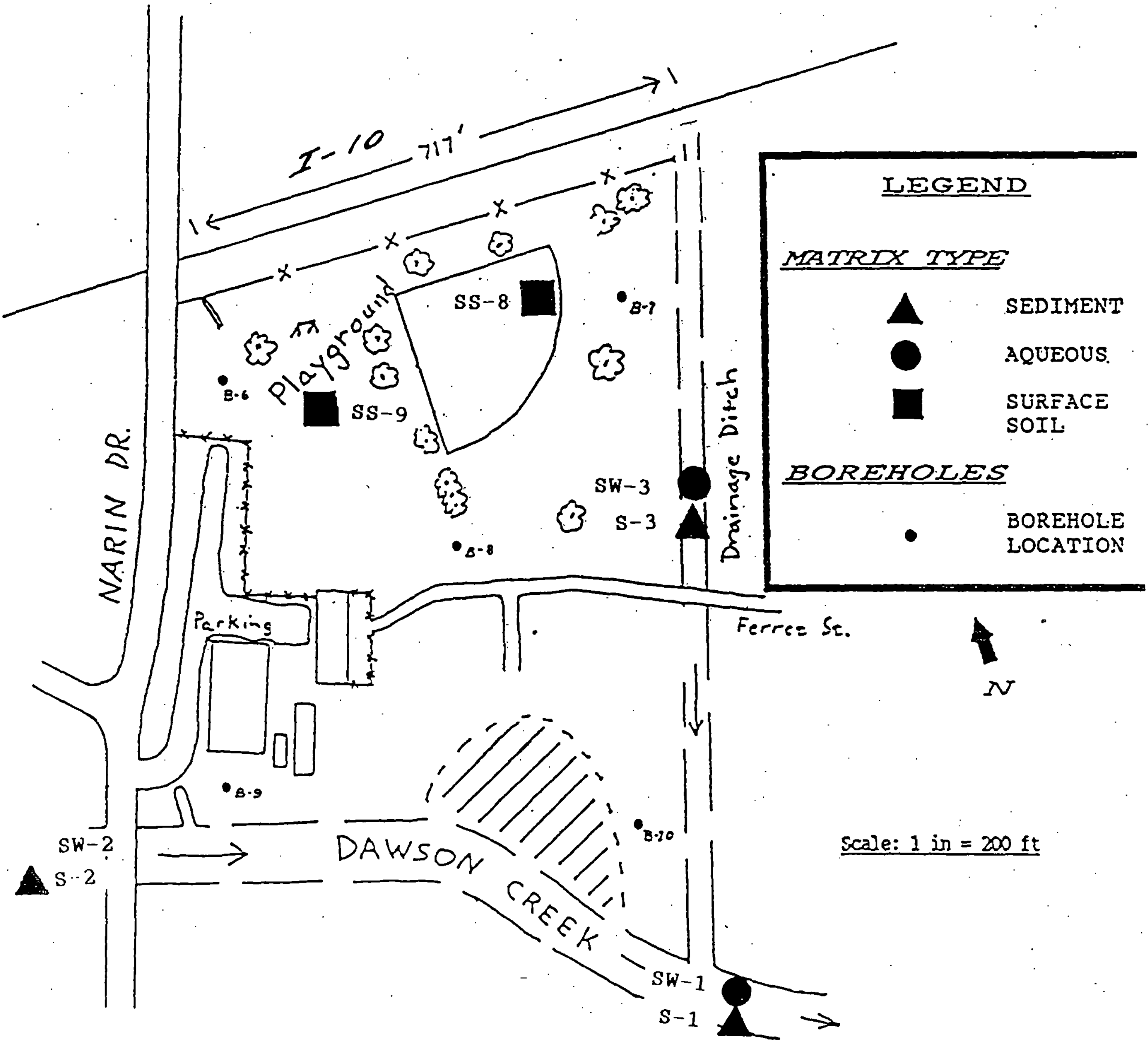
SAMPLE LOCATION PLAT 10-9-91



2.6 Sample Location Plat (Southern Section)

VALLEY PARK SCHOOL (SSI)

SAMPLE LOCATION PLAT 10-9-91

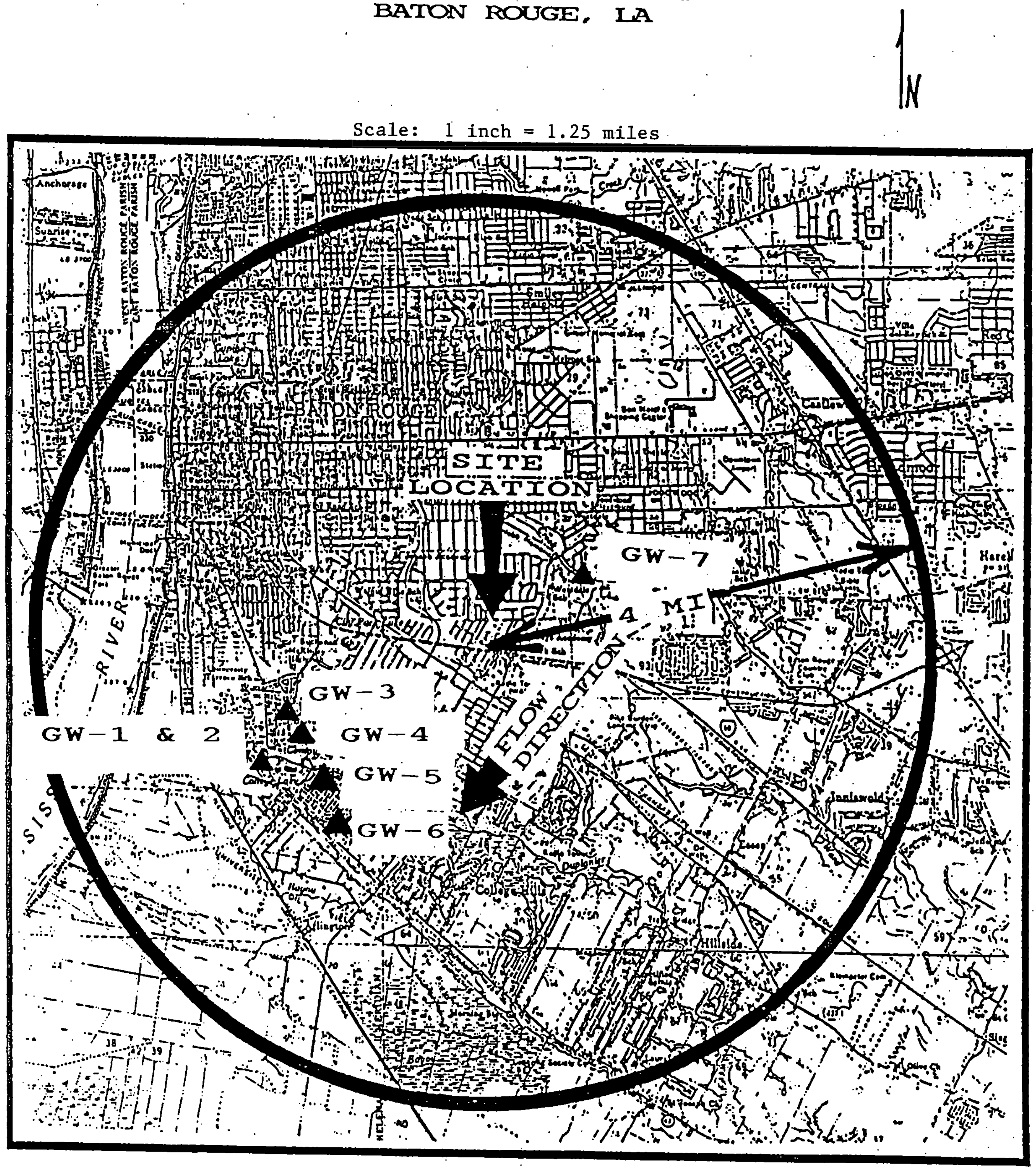


2.7 Sample Location Plat (Water Wells)

WATER WELL SAMPLING LOCATIONS

VALLEY PARK LANDFILL
BATON ROUGE, LA

Scale: 1 inch = 1.25 miles



3. ANALYTICAL RESULTS

3.1 Narrative

note: For complete explanation of Routine Analytical Services data flags, see RAS data flags definitions at the end of the Sample Analyses Summary Table (Appendix B).

Results were compared with Table 2.3 of the US EPA Hazard Ranking System (40 CFR 300) to see if they qualified as an **observed release.**

Sample Measurement < Sample Quantitation Limit

No observed release is established.

Sample Measurement ≥ Sample Quantitation Limit

An observed release is established as follows:

- If the background concentration is not detected (or is less than the detection limit), an observed release is established when the sample measurement equals or exceeds the sample quantitation limit.
- If the background concentration equals or exceeds the detection limit, an observed release is established when the sample measurement is 3 times or more above the background concentration.

Volatiles

Levels of 4 Target Compound List (TCL) volatile organic compounds were detected in 7 surface soil samples, 1 surface water sample and 5 sediment samples. No volatile organic compounds were detected in ground water samples (See Sample Analyses Summary Table). Eleven of the 17 volatile detections were flagged "J" or "BJ", which indicates either the associated value is an estimated quantity or the associated value is an estimated quantity and is found in the associated blank as well as the sample. There were six **observed release** detections of acetone in the following: S-1, S-5, S-6 (field duplicate of S-5), S-7, SS-5, and SS-7. Detection of acetone could be attributable to laboratory artifact.

Pesticides/PCBs

Two TCL Aroclors and 7 TCL Pesticides were detected at a total of five sample locations for surface water sediments and surface soils: S-5, S-6, SS-4, SS-8, and SS-9. Sample S-6 is a field duplicate of S-5. These sediment samples were taken at the extreme northern point of the deep drainage ditch, just after drainage crosses underneath Bawell St. through a drain pipe and outfalls into the deep drainage ditch that borders the eastern edge of the Valley Park site. The Pesticides/PCBs detected in S-5 and Field Duplicate S-6 are from sediments falling from the urban surface water drainage **north** of Bawell Street.

Aldrin (11 UG/KG), 4,4'-DDT (12 UG/KG), and Aroclor-1248 (830 UG/KG) were detected in S-6. Aroclor-1242 (180 UG/KG) was detected in SS-4. Samples SS-4, SS-8, and SS-9 contained levels of 5 pesticides ranging from alpha-Chlordane (4.3 UG/KG) to 4,4'-DDE (17 UG/KG). These detections constitute an **observed release** according to Table 2.3 of the HRS.

Semi-Volatiles and Tentatively Identified Compounds (TICs)

The greatest number of detections occurred in the TCL semi-volatile and tentatively indentified compounds (TICs) analytical categories. Most of these detections (494 out of 538) were flagged with the following data qualifiers: B, J, BJ, and NJ (See qualifiers definition list at the end of the Sample Analyses Summary Table).

No TCL semi-volatile compounds or TICs were detected above the Sample Quantitation Limit (SQL) in ground water samples GW-1 ▸ GW-7. Di-n-butylphthalate was found in GW-1 ▸ GW-7 at levels below the SQL (1-2 UG/L); seven TICs were found in GW-1 ▸ GW-7 below the SQL and flagged "J" or "BJ". Consequently, no observed releases were detected.

No TCL semi-volatile compounds or TICs were detected above the SQL in the surface water samples SW-1 ▸ SW-10. All detections (< SQL) were flagged with "J", "BJ", or "NJ". Consequently, no observed releases were detected.

All deep drain ditch sediments and Dawson Creek sediments exhibited semi-volatile and TIC detections. Samples S-1, S-5, and S-6 (Field Duplicate of S-5) showed concentrations of semi-volatile compounds above the SQL; therefore, **S-1** and **S-5** exhibited **observed releases.** Sample S-5 and S-6 were located 1' from the storm water outfall drain just south of Bawell Street. These samples represent the storm water outfall coming from off-site areas north of the Valley Park site. Representative compounds detected include benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, fluoranthene, phenanthrene, and pyrene. Sediment samples S-4 and S-3, located in the deep drain ditch, showed estimated "J" values of only 5 semi-volatile compounds. Two of these compounds were also found in the associated blanks (See Sample Analyses Summary Table). Sample S-7, sediment collected directly below discharge from a corrugated drain pipe draining into the deep drain ditch, also showed estimated "J" values of 10 semi-volatiles. Two of the 10 detected compounds were also found in associated blanks.

Sample S-1, sediment from the farthest downstream location in Dawson creek, showed compounds and concentrations of compounds similar to those seen in Sample S-5 and S-6. It is notable that this sample was taken approximately 200' downstream from a city DPW construction debris pile.

All on-site soil samples (SS-2 ▸ SS-9) taken from 0-6" into the cap clay material of the Valley Park site showed various TCL semi-volatiles and TICs. All values were flagged with "J" (estimated values) or "BJ" (estimated values; value also found in the associated blank). All semi-volatile TCLs **were below the SQL** for the on-site soil samples. Some of these detections were also found in the off-site background sample, SS-1. No discernible pattern can be seen when comparing these values to either the background sample or between the samples themselves. The highest concentration target compound was fluoranthene at 390 UG/KG ("J" flagged) in SS-4. SS-5, SS-6 (field duplicate of SS-5), and SS-7 were samples taken of the red-stained or rust-colored soils present on the side of the west embankment of the deep drain ditch. Again, these samples showed no detections of semi-volatile TCL or TIC compounds above the SQL.

Metals

Target Analyte List (TAL) inorganics were obtained for ground water, surface water, on-site soils, and surface water sediments.

Ground water samples (GW-1 ▸ GW-7) and surface water samples (SW-1 ▸ SW-9) exhibited no detections above the associated inorganics primary drinking water standards of the Safe Drinking Water Act (Ref. 25: 40 CFR 141.11).

Cyanide was found in surface water sample SW-5 (deep drain ditch) at a level of 120 UG/L, with decreasing levels detected downstream: SW-4 (21.2 UG.L), SW-9 (12.6 UG/L), SW-3 (16.1 UG/L), and SW-1 (11.2 UG/L).

On-site surface soils were compared with the background soil levels represented by SS-1. According to Table 2.3 of the USEPA Hazard Ranking System (40 CFR 300) an **observed release** is established when the sample measurement is 3 times or more above background, if the background concentration equals or exceeds the detection limit (Ref. 26).

Using the criteria above, observed releases were noted for non-priority and priority metals: aluminum, barium, cadmium, calcium, cobalt, copper, iron, mercury, potassium, silver, thallium, and zinc. Specifically, elevated levels of iron, calcium, aluminum, and potassium were seen in soil samples SS-5, SS-6 (field duplicate of SS-5), and SS-7. These were the soils that were stained with reddish coloration. Six priority metals (Arsenic, cadmium, copper, mercury, silver, and zinc) were compared with ranges of concentrations as depicted near the Baton Rouge area in "Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States" -- a USGS Professional Paper by Shacklette and Boerngen (Ref. 27):

Element	Detected Location	Detected Conc. or Conc. Range (ppm)	USGS PP 1270 Range (ppm)
Arsenic	SS-2,3,4,7,8	4.6 - 7.4	4.1 - 10
Cadmium	SS-2	1.3	not shown
Copper	SS-2	28.7	15 - 30
Mercury	SS-2	0.33	.2 -5.1
Silver	SS-2	0.79B	not shown
Zinc	SS-2,4,7,8	91.2 - 173	28 - 74

B - Indicates analyte was found in associated blank as well as the sample

Surface water sediment samples (S-1 ▶ S-7) were examined in the same way as for surface soils. Using sample S-2 (the most upstream Dawson Creek location) as representative of background concentrations for urban run-off sediments, observed releases were noted (3 times above S-2 concentrations) for arsenic, beryllium, cadmium, calcium, copper, iron, lead, manganese, nickel, thallium, vanadium, and zinc. All observed releases except for one (S-5) occurred in S-1, S-6 (Field duplicate of S-5), and S-7.

Priority pollutant metals were compared with the USGS Professional Paper 1270 element ranges found near the Baton Rouge area:

Element	Detected Location	Detected Conc. or Conc. Range (ppm)	USGS PP 1270 Range (ppm)
Arsenic	S-1	27.7	4.1 - 10
Beryllium	S-6	5	0 - 1
Cadmium	S-6	8.3	not shown
Copper	S-6,7	62.4 - 96.1	15 - 30
Lead	S-1,7	87.4 - 175	10 - 20
Nickel	S-6	137	20 - 700
Thallium	S-7	0.30B	not shown
Zinc	S-5,6,7	170 - 325	28 - 74

B: Indicates that analyte was found in the associated blank as well as the sample

Sample S-6 is located just south of Bawell Street, at the extreme North end of the deep drain ditch. It represents sediment that has accumulated from run-off coming from drainage points north of the site. Sample S-7 is located about mid-point between the I10 R.O.W. and S-6 (See map). S-1 is just downstream of the confluence of Dawson Creek with the deep drain ditch.

3.2 Sample Analyses Summary Table (See Appendix B)

This table presents all detections **not** flagged with a "U" data flag; the "U" qualifier indicates those compounds that were analyzed for but not detected.

The data qualifiers definitions and TCL Contract Required Quantitation Limits (CRQL) can be located at the end of the Sample Analyses Summary Table. The
"Table" was derived from the CLP laboratory data submitted with this report.

Note: Matrix spikes (MS), matrix spike duplicates(MSD), and secondary dilution factor analyses (DL) samples are included in the "Table".

3.3 Data Validation Summary

Environmental data associated with samples taken from the Valley Park Site were subjected to data validation by the USEPA (or its contractor). The guidelines utilized for the data validation process were "Laboratory Data Validation Functional Guidelines for Evaluating Organics Analysis" (USEPA 1988) and "Laboratory Data Validation functional Guidelines for Evaluating Inorganics Analysis" (USEPA 1988), for organic and inorganic data, respectively.

In general, the following criteria are typically considered when subjecting CLP (Contract Laboratory Program) formatted, organic analytical data to the data validation process:

Holding Times
GC/MS Tuning
Calibration
Blanks
Surrogate Recovery
Matrix Spike / Matrix Spike Duplicates
Field Duplicates
Internal Standards Performance
Overall Assessment of Data.

The criteria that are considered for validating inorganic data under the data validation guidelines are:

Holding Times
Calibration
Blanks
ICP Interference Check Samples
Laboratory Control Sample
Duplicate Sample
Furnace Atomic Absorption Quality Control
ICP Serial Dilution
Field Duplicates
Overall Assessment of Data.

Once validated, data are qualified with codes (qualifiers) according to the data validation guidance criteria. A listing of the qualifiers and their respective definitions have been included as a table in this document.

4. PATHWAY CHARACTERISTICS AND TARGET OBJECTIVES

Ground water, surface water, soil exposure and air pathway characteristics and targets are summarized below.

4.1 Source/Waste Characterization

The potential on-site source of contamination is the municipal waste buried at the site. The City-Parish maintained no records as to types and/or quantities of waste materials received by its landfills prior to the early 1970's. It is estimated that the site includes thirty-six (36) acres of garbage/fill material approximately seven (7) feet deep covered by a two (2) foot clay cap.

There are no containment structures on the site except the clay cap. A site visit was made to verify the depth and condition of the clay cap. Ten boreholes were installed, B-1 through B-10, (See Sample Location Plats 2.4 & 2.5). A three inch hand operated auger was used for this purpose. The soil surface was penetrated from the surface to a maximum depth of five feet, or until garbage/fill was encountered. Each borehole had at least a two foot clay cap. Garbage/fill was encountered at each borehole at two to three feet. The general condition of the cap appeared intact. There were no apparent outcroppings of garbage on top of the site. Outcroppings of trash/rubble were observed along the east side of the site along an open ditch (Ref. 16)

4.2 Air Pathway

The site is located within a densely populated urban area, complete wtih multiple housing, shopping complexes, chruches, restaurants, and other businesses. The target population within the four mile target radius limit is based on U.S. Census figures of 1990. The census was divided into census tracts sized between 2,500 and 8,000 residents that are similar in population characterisitcs. Target radii were superimposed on an enlarged map containing census tracts to facilitate the use of a planimeter to obtain an accurate count within each radius segment. The total population of each tract segment within a radius zone was obtained by determining the percent partial area multiplied by the total census tract population. The populations are as shown below (Ref. 17):

RADIUS DISTANCE FROM SITE	POPULATION
0 to ¼ mi	1,787
¼ to ½ mi	2,474
½ to 1 mi	6,048
1 to 2 mi	30,840
2 to 3 mi	45,066
3 to 4 mi	47,068

TOTAL POPULATION WITHIN A FOUR MILE RADIUS: 133,883

During field sampling, air monitoring conducted on-site with an organic vapor monitor (OVM) did not detect concentrations above background at the surface. An Indoor Air Investigation was conducted at the Valley Park Administration Building which sits atop the landfill. Based on the analytical results of the indoor air sampling, no harmful chemicals were being emitted into the indoor air environment of the building.

4.3 Ground Water Pathway

East Baton Rouge Parish overlies twelve (12) freshwater aquifers aligned in layers of sand from 200 to 3100 feet below sea level. A blanket layer of hard pleistocene clay restricts migration between the surface ground water and the underlying sands.

The University Sand lies above the 400′ Sand and is the most surfical aquifer containing water wells. The flow direction of the University sand aquifer in East Baton Rouge Parish appears to flow in a north to south-southwest direction, as does the "400 ft. sand". There is no documentation concerning horizontal flow patterns for this aquifer, however the "University sand" and the "400 foot" sand are considered to have a close relationship in that they interconnect. Therefore, the best assumption is that the University Sand most probably flows in the same direction as the "400 ft. sand". Ground water direction is well documented for the 400 ′sand. (Ref 18).

Five well samples were collected from 334 to 361 feet in depth located in the University Sands, one of which was a duplicate. Four wells are located down-gradient from the site and, as well as could be determined, are the shallowest and closest wells to the site. One background sample was collected up gradient, north of the site, at a depth of 390 ft.

4.4 Surface Water Pathway

An open drainage ditch bounds the site on the east side, and flows southwesterly into Dawson Creek. It is approximately 60 feet in width and 20 feet deep from the top of the landfill cap to the bottom of the drainage ditch. The ditch serves as a major drainage system for the residential area North of the site. Dawson Creek borders the southern end of the site. Surface run-off and leachate from the site eventuates into Dawson Creek. Dawson Creek flows southeasterly 6.3 miles emptying into Ward's Creek. At a point 12.3 miles downstream from the site, Ward's joins Bayou Manchac. The target distance limit of fifteen (15) miles is reached 2.7 miles downstream on Bayou Manchac, where Welsh Gully intersects.

The Bayou Manchac is used for recreational purposes including fishing and hunting. Residential dwellings exist along the Bayou Manchac within the fifteen (15) mile target distance limit. No declared wetland and/or sensitive environments exist within the 15 mile target distance limit (Ref. 19 & 20). There are no known drinking water intakes along the 15 mile target limit distance limit (Ref. 21).

4.5 On-Site Exposure Pathway

The onsite exposure pathway is of high concern considering the high usage and location of the administration building and the recreational facilities.

Three areas have been targeted for on-site exposure pathway consideration and are: (1) observed intermittent leachate flowing into the drainage ditch just south of the school building, (2) the recreational surface play areas, (3) and the surface area around the administration building. Samples were collected from all of these areas and results discussed in Section 3.1. There is a 2 foot clay cap over the former landfill area. Exposed areas along the east deep drain ditch, the south bank of the northern landfill section, and deep drain ditch and Dawson Creek sediments exhibited detections of hazardous substances above the SQL. Designation of Areas of Contamination (AOCs) are difficult due to the sparse number and concentration level of postive contaminant detections. No patterns of migration of hazardous substances from the landfill were noted, when comparing surface soils SS-5, 6, and 7 with sediment samples S-7,4,3, and 1. Zinc was the only compound that was evident in samples from the bank of the ditch and also in the ditch sediment. It is difficult to designate the deep drain ditch as an area of contamination (AOC) due to the landfill because of the heavy influence of urban storm water run-off from areas north of the site.

Resident Populations

The northern 23 acre section of the Valley Park site includes the Valley Park Administration Complex, parking lots, basketball courts, and two baseball fields. Approximately 300 people occupy the building on a full or part-time basis.

The southern area, totaling 13 acres, is occupied by th East Baton Rouge Parish Recreation and Parks Commission and the Baton Rouge City Parish. This area includes an indoor recreation center, three adjacent buildings, a baseball field, an adolescent playground area, and a large stockpile of dirt and rubble used by the Department of Public Works. Approximately 1500 people use the recreation center and approximately 300 people use the outdoor facilities on a monthly basis. The three buildings are occupied by 27 City/Parish staff members (Ref. 1,2, & 3).

5. PROJECT MANAGEMENT

5.1 Key Personnel

On October 7 & 8, 1991, staff included Tom Mayhall (site safety officer and sampler), John Halk (team leader), Todd Thibodeaux (decontamination officer) and Kyle Moppert (sampler) of LDEQ/IASD and Thea Sloan (CLP Coordinator) with Ecology and Engineering (TAT). On October 9, 1991, Samples were collected by Tom Mayhall (team leader and site safety officer), Kyle Moppert (sampler) and Thea Sloan (CLP Coordinator). EPA tasked TAT team member Thea Sloan to tag, package and ship samples in accordance with CLP criteria.

The Project Manager for the SSI sampling was Tom Mayhall, who developed the work plan, gained site access (Ref. 22, 23 & 24), and was the site safety officer. John Halk was the field team leader October 7 and 8, 1991 and Tom Mayhall was the field team leader October 9, 1991. TAT team member Thea Sloan was the CLP coordinator. The remaining sampling team members were Todd Thibodeaux and Kyle Moppert.

6. CONCLUSIONS

A total of 33 environmental samples (including QA/QC samples) were taken at the Valley Park School (LAD985170273) by the Inactive and Abandoned Sites Division, LDEQ, under a multi-site grant administered by the State. The sampling episode was performed during the period October 7-9, 1991. Contract Laboratory Program (CLP) procedures were followed with regard to identifying, tagging, shipping, and analyzing the samples. Although not a part of the SSI Workplan, air monitoring was done at the site. An Indoor Air Investigation (Ref. 14) was completed by DEQ/DHHR at the Valley Park Administration Complex. This study was in response to many reported health problems from occupants in the building, mostly respiratory in nature. The study concluded that, based on the analytical results of the indoor air sampling, no harmful chemicals were being emitted into the indoor air environment of the building. An organic vapor monitor (OVM) did not detect emissions at the site surface at the various sample locations. Analytical results from ground water samples collected in the "University Sands" between 334 and 361 feet in depth and down-gradient from the site indicate that contamination is not present in the strata studied. Surface water analytical results indicated no volatile, semi-volatile and TICs, or pesticides/PCBs above the SQL. Low concentrations of cyanide was found in the deep drain ditch surface water, with decreasing levels downstream.

Surface water sediments exhibited detections of TCL and TAL compounds. Most of the compounds detected were below the SQL. For example: 494 of 538 Semi-volatile and TIC detections for all samples were flagged with the data qualifiers "B", "J", "BJ", or "NJ". For sediment samples, a definite contaminant influence of urban run-off is seen in the drainage coming into the deep drain ditch north of the site (above Bawell Street). Observed releases were documented for sediments within the study area. Most of these releases occurred in S-5 and S-6, located just south of the Bawell Street culvert crossing. A pattern of migration of observed release contaminants was not readily discernible above the "background noise" of the urban run-off contaminant influence. The metal Zinc was the only element found that constituted an observed release and was found in both the reddish-stained soils of the deep ditch bank and the deep ditch sediments.

Low detections of organics in the on-site surface soils (almost all below the SQL) do not indicate a migration of potential hazardous constituents from the landfill. Possible explanations for the detections include import of clay fill material from another geographical location with accompanying background concentrations, past application of herbicides and insecticides in routine maintenance, and hydrocarbon emissions or fuel leaks from grass-mowing machines used at the site.

7. APPENDICES

APPENDIX A

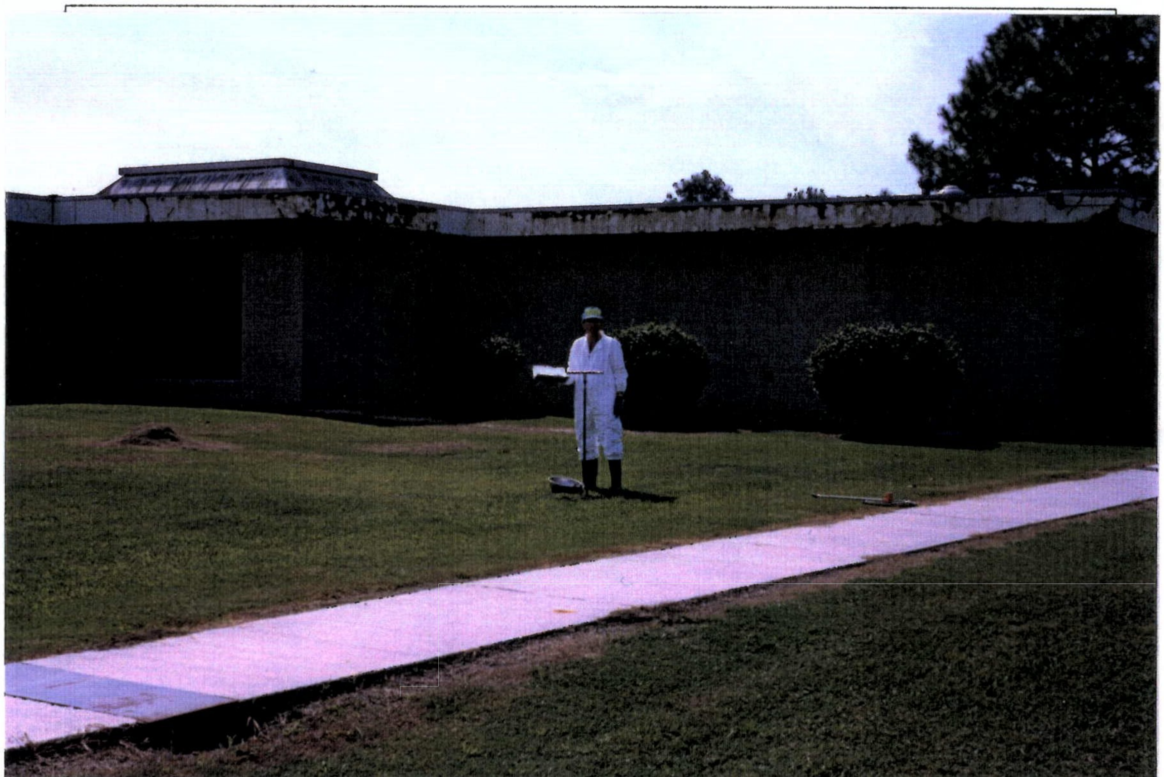
PHOTO NO.
1

PHOTOGRAPHER/WITNESS KYLE MOPPERT KM TOM MAYHALL TM

DATE 10-8-91 TIME 1000 HRS DIRECTION N

DESCRIPTION SAMPLE NO SS-1

PHOTO NO.
2



PHOTOGRAPHER/WITNESS KYLE MOPPERT KM TOM MAYHALL TM

DATE 10-8-91 TIME 1030 HRS DIRECTION SSE

DESCRIPTION SAMPLE NO SS-2

PHOTO NO.
3

PHOTOGRAPHER/WITNESS KYLE MOPPERT/TOM MAYHALL KM TM

DATE 10-8-91 TIME 1100 hrs DIRECTION W

DESCRIPTION SAMPLE NO SS-3

PHOTO NO.
4

PHOTOGRAPHER/WITNESS KYLE MOPPERT/TOM MAYHALL KM TM

DATE 10-8-91 TIME 1200 hrs DIRECTION N

DESCRIPTION SAMPLE NO SS-4

PHOTO NO. 5

PHOTOGRAPHER/WITNESS KYLE MOPPERT KM /TOM MAYHALL TM

DATE 10-8-91 TIME 1215 hrs DIRECTION E

DESCRIPTION SAMPLE NO SS-8

PHOTO NO. 6

PHOTOGRAPHER/WITNESS KYLE MOPPERT KM TOM MAYHALL TM

DATE 10-8-91 TIME 1230 hrs DIRECTION N

DESCRIPTION SAMPLE NO SS-9

PHOTO NO. 7

PHOTOGRAPHER: KYLE MOPPERT KM
WITNESS: TOM MAYHALL TM
DATE: 10-9-91
TIME: 0900 hrs
DIRECTION: S
DESCRIPTION: SAMPLE NO S-1

PHOTOGRAPHER: KYLE MOPPERT KM
WITNESS: TOM MAYHALL TM
DATE: 10-9-91
TIME: 0930 hrs
DIRECTION: NW
DESCRIPTION: SAMPLE NO S-2

PHOTO NO. 8

PHOTO NO.
9

PHOTOGRAPHER/WITNESS KYLE MOPPERT/TOM MAYHALL KM TM

DATE 10-9-91 TIME 1000 hrs DIRECTION N

DESCRIPTION SAMPLE NO S-3

PHOTO NO.
10

PHOTOGRAPHER/WITNESS TOM MAYHALL/KYLE MOPPERT TM KM

DATE 10-9-91 TIME 1030 hrs DIRECTION E

DESCRIPTION SAMPLE NO S-4

PHOTO NO.
11

PHOTOGRAPHER:	JOHN HALK JH
WITNESS:	TOM MAYHALL TM
DATE:	10-9-91
TIME:	1100 hrs
DIRECTION:	N
DESCRIPTION:	SAMPLE NO S-6

PHOTOGRAPHER:	TOM MAYHALL TM
WITNESS:	KYLE MOPPERT KM
DATE:	10-9-91
TIME:	1130 hrs
DIRECTION:	NW
DESCRIPTION:	NO S-7

PHOTO NO.
12

PHOTO NO. 13

PHOTOGRAPHER/WITNESS JOHM HALK JH/TOM MAYHALL TM

DATE 10-9-91 TIME 1200 hrs DIRECTION N

DESCRIPTION SAMPLE NO SW-3

PHOTO NO. 14

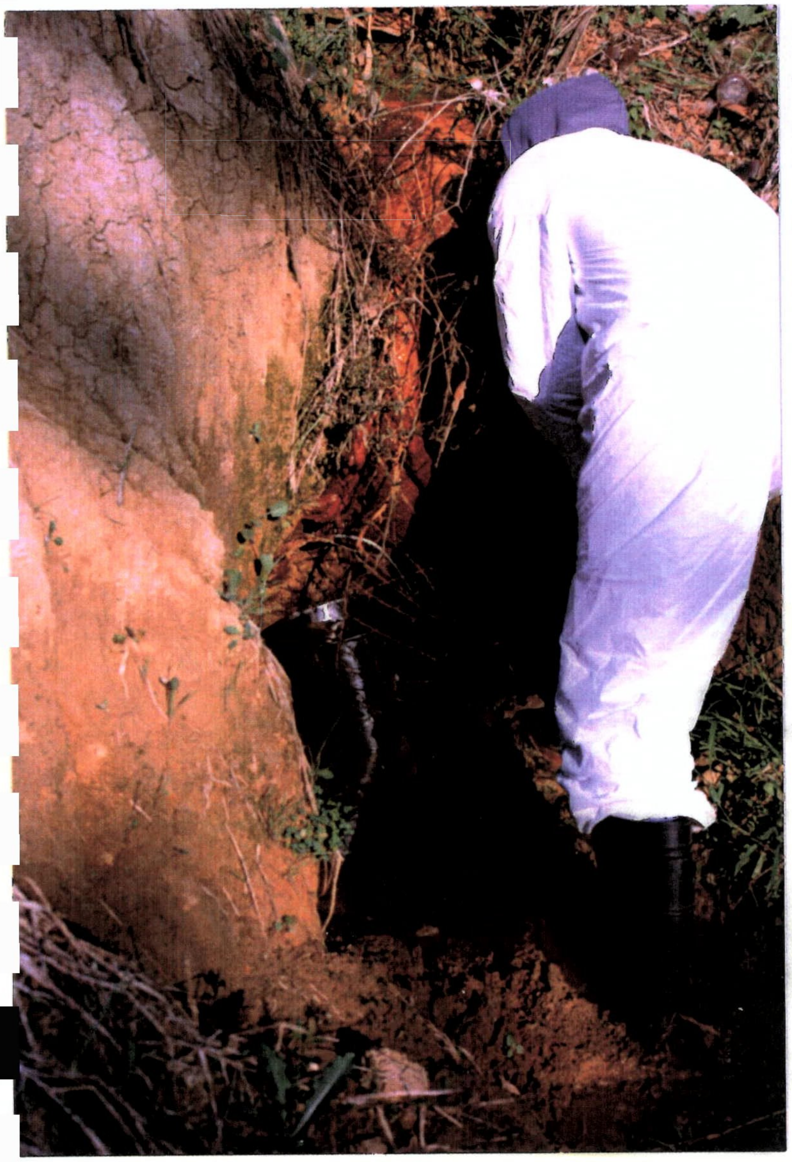
PHOTOGRAPHER/WITNESS JOHN HALK JH/TOM MAYHALL TM

DATE 10-9-91 TIME 1230 hrs DIRECTION E

DESCRIPTION SAMPLE NO SW-4

PHOTO NO.
15

PHOTOGRAPHER: JOHN HALK
WITNESS: TOM MAYHALL
DATE: 10-9-91
TIME: 1300 HRS
DIRECTION: E
DESCRIPTION: SAMPLE NO SW-5



PHOTOGRAPHER: JOHN HALK
WITNESS: TOM MAYHALL
DATE: 10- 9-91
TIME: 1300 HRS
DIRECTION: NW
DESCRIPTION: SAMPLE NO SW-8

PHOTO NO.
16

PHOTO NO.

17

PHOTOGRAPHER: JOHN HALK

WITNESS: TOM MAYHALL

DATE: 10-10-91

TIME: 0900 HRS

DIRECTION: SE

DESCRIPTION: SAMPLE NO GW-1 & GW-2

PHOTOGRAPHER: JOHN HALK

WITNESS: TOM MAYHALL

DATE: 10-9-91

TIME: 1400 HRS

DIRECTION: NW

DESCRIPTION: SAMPLE NO SW-9

PHOTO NO.

18

PHOTO NO.
19

PHOTOGRAPHER: TOM MAYHALL

WITNESS: KYLE MOPPERT KM

DATE: 10-10-91

TIME: 0930 HRS

DIRECTION: E

DESCRIPTION: SAMPLE NO GW-3

PHOTOGRAPHER: TOM MAYHALL

WITNESS: KYLE MOPPERT KM

DATE: 10-10-91

TIME: 1000 HRS

DIRECTION: N

DESCRIPTION: SAMPLE NO GW-4

PHOTO NO.
20

PHOTO NO.
21

PHOTOGRAPHER: TOM MAYHALL TM

WITNESS: KYLE MOPPERT KM

DATE: 10-10-91

TIME: 1000 HRS

DIRECTION: NW

DESCRIPTION: SAMPLE NO GW-6

PHOTOGRAPHER: TOM MAYHALL TM

WITNESS: KYLE MOPPERT KM

DATE: 10-9-91

TIME: 1030 HRS

DIRECTION: SAMPLE NO GW-5

DESCRIPTION:

PHOTO NO.
22

PHOTO NO.
23

PHOTOGRAPHER/WITNESS TOM MAYHALL/KYLE MOPPERT TM KM

DATE 10-10-91 TIME 1400 HRS DIRECTION NE

DESCRIPTION SAMPLE NO. GW-7

APPENDIX B

Valley Park Site - Baton Rouge, Louisiana Sample Analyses Summary Table				Pesticides/PCB's Numbers FT210MS -FT226				
Lab Number	FT210MS	FT210MSD	FT214	FT215	FT215DL	FT221	FT225	FT226
Sample Num	S-1	S-1	S-5	S-6	S-6	SS-4	SS-8	SS-9
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Conc. Units	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Aldrin	15	18		11.P	32.P			
alpha-Chlordane	13	13				4.3P		5.2P
Aroclor-1232						180		
Aroclor-1248				830	1700			
4,4'-DDD	26.P	13					6.5	4.6P
4,4'-DDE	26.P	12				6.9P	4.4	17.P
4,4'-DDT	39.P	40.P		12.P				
delta-BHC						5.2P		
Dieldrin	55	56						
Endrin	36.P	23.P						
gamma-BHC (Lindane)		14						
gamma-Chlordane	16	17.P	11.P			16.P		4.9P
Heptachlor	18	20						

Notes:
DL - Indicates sample or extract was reanalyzed at a high dilution factor.
MS - Indicates sample was a matrix spike.
MSD - Indicates sample was a matrix spike duplicate.

Valley Park Site - Baton Rouge, Louisiana | **Metals**

Sample Analyses Summary Table | **Numbers MFR601 - MFR616**

Lab Number	MFR601	MFR602	MFR603	MFR604	MFR605	MFR606	MFR607	MFR608	MFR609	MFR610	MFR611	MFR612	MFR613	MFR614	MFR615	MFR616
Sample Num	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8	SW-9	S-1	S-2	S-3	S-4	S-5	S-6	S-7
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Conc. Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
Aluminum	347	229	628	970	141B	277	122B	71.3B	123B	7290	12800	16300	23600	24800	16300	10300
Antimony									33.8B							
Arsenic	4.8B	4.0B	1.6B	1.9B	2.8B	3.1B	3.3B	1.4B	1.6B	27.7	5.8	0.90B	2.7	7.5	4.8	8.2
Barium	73.1B	53.5B	162B	125B	139B	166B	154B	66.4B	101B	272	475	226	113	233	355	167
Beryllium										1.2B	1.1B	0.75B	0.59B	1.2B	5	0.82B
Cadmium											1.1B				8.3	
Calcium	34400	27600	38100	28700	28700	32300	31200	33800	33400	19900	2700	3270	2440	4610	13200	5830
Chromium		9.9B			13.5			15.1		22.5	20.5	20.8	26.3	44.8	16.4	22.5
Cobalt					11.0B			7.4B		18	73.3	8.0B	4.0B	13.6	94.8	13.4B
Copper	29.4	14.3B	5.9B	15.1B	13.4B	13.4B	18.5B			18.9	11.3	8.4	10.3	23	62.4	96.1
Iron	388	351	1080	977	4880	490	98.0B	1850	1130	27100	25800	14700	18300	28100	70800	35400
Lead	7.5	5.2	4.1	4.7	6.2	3.1	2.7B	3.7	1.1B	175	25.6	9	11.2	55.7	44.1	87.4
Magnesium	8990	6460	16300	10500	19400	7650	7320	15200	17700	1700	1990	2250	1990	3660	2550	1910
Manganese	117	125	86.8	39	97.8	198	184	90.6	141	1780	2550	720	125	592	16500	1430
Mercury														0.39	0.62	0.25
Nickel	23.1B				17.3B			17.3B	16.8B	15.1	29.7	13.3	12.5	24.6	137	22.4
Potassium	8000	7820	11200	7080	55600	5900	5900	33370	26900	448B	672B	1020B	737B	2440	1070B	548B
Selenium										0.39B						
Silver																
Sodium	93100	93500	88400	97200	102000	96200	94000	61400	56400	155B	147B	161B	192B	223B	207B	134B
Thallium																0.30B
Vanadium	5.2B		4.1B	4.1B		3.1B	3.2B		3.0B	52.4	58.8	28.2	44.9	63.6	219	40.8
Zinc	25.2	23.5	16.9B	28.2	59.5	18.2B	18.8B	9.2B	9.2B	125	34.3	40.9	32.5	325	315	170
Cyanide	11.2		16.1	21.2	120				12.6							

Notes:

DL - Indicates sample or extract was reanalyzed at a high dilution factor.

MS - Indicates sample was a matrix spike.

MSD - Indicates sample was a matrix spike duplicate.

Valley Park Site - Baton Rouge, Louisiana **Metals**

Sample Analyses Summary Table **Numbers MFR617 - MFR633**

Lab Number	MFR617	MFR618	MFR619	MFR620	MFR621	MFR622	MFR623	MFR624	MFR625	MFR626	MFR627	MFR628	MFR629	MFR630	MFR631	MFR632	MFR633
Sample Num	SW-10	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	GW-1	GW-2	GW-3	GW-4	GW-6	GW-5	GW-7
Matrix	Water	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Water	Water	Water	Water	Water	Water	Water
Conc. Units	UG/L	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Aluminum	84.3B	7820	11100	16800	14400	19200	18400	25000	17000	7070	88.0B	30.4B	131B	103B	43.4B	50.8B	117B
Antimony											34.9B	31.4B				35.8B	
Arsenic		1.4B	4.6	7.4	5.2	4.2	3.6	5.3	4.9	1.1B	27.9	34.8B					1.1B
Barium	1.8B	97.7	332	324	170	141	167	121	180	99.9	439	461	404	260	207	361	57.3B
Beryllium		0.53B	0.86B	1.1B	0.77B	1.3B	0.76B	0.93B	0.88B	0.35B							
Cadmium			1.3														
Calcium	55.6B	538B	4110	4820	3210	2260	2540	1780	2760	4910	101000	102000	80100	39500	30200	73800	3760B
Chromium		10.1	24	21.5	21.5	25.8	22.7	29.9	22.6	8.6							
Cobalt		4.3B	14.4	9.8B	7.3B	9.8B	7.5B	15	6.7B	3.8B							
Copper	10.9B	8	28.7	12.3	18.9	10	10.5	20.1	19.2	7.6	13.4B		12.6B	11.7B		5.0B	25.2
Iron	37.4B	7150	25700	18900	22000	31400	38500	27700	17400	7730	74.8B	1600	1230	115	134	43.1B	276
Lead	2.1B	28.5	81.2	17.1	16.9	10.9	7.3	14	56.1	21.5		1.1B	2.6B	1.2B	1.9B	2.5B	1.8B
Magnesium	26.3B	484B	2250	3270	1820	3200	2970	3420	1950	685B	29900	30200	27100	12800	9400	24000	1670B
Manganese		819	1640	1460	167	130	127	156	489	364	240	242	176	150	139	350	98.2
Mercury			0.33														
Nickel		9.6B	20.4	19	16.9	19.8	19.4	21.7	16.8	4.3B							
Potassium		297B	949B	1250	1160B	1520B	1590	1960	1200B	352B	2460B	2300B	1510B	1620B	1600B	1670B	1350B
Selenium		0.47B						0.36B	0.32B								
Silver			0.79B														
Sodium	292B	47.1B	73.7B	181B	171B	174B	177B	172B	81.1B	41.6B	23100	23500	65300	104000	78100	62200	50200
Thallium				0.26B	0.27B	0.39B			0.31B								
Vanadium	4.2B	18.2	30.1	33.3	33.9	38.4	37.3	50.2	37.2	15.3	3.2B	4.0B			4.2B	4.2B	
Zinc	9.4B	28	173	63.9	123	65	61.9	91.2	115	47.4	10.2B	6.7B	10.3B	113	43.6	7.9B	61.5
Cyanide																	

Notes:

DL - Indicates sample or extract was reanalyzed at a high dilution factor.

MS - Indicates sample was a matrix spike.

MSD - Indicates sample was a matrix spike duplicate.

Valley Park Site - Baton Rouge, Louisiana **Volatiles & Semi-volatiles**

Sample Analyses Summary Table **Numbers FT201 - FT215DL**

Lab Number	Retention	FT201	FT202	FT203	FT204	FT205	FT206	FT207	FT208	FT209	FT210	FT210DL	FT210MS	FT210MSD	FT211	FT212	FT213	FT214	FT215	FT215DL
Sample Num	Time	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8	SW-9	S-1	S-1	S-1	S-1	S-2	S-3	S-4	S-5	S-6	S-6
Matrix		Water	Water	Water	Water	Water	Water	Water	Water	Water	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Conc. Units		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
VOLATILES																				
Acetone									4.BJ		21				8.J	6.J	11.J	33	21	
2-Butanone																		7.J		
Chlorobenzene									9.J											
Disulfide, Dimethyl																				
SEMI-VOLATILES																				
Acenaphthene											660	680.DJ	1600	1500				120.J		12000.D
Acenaphthylene											170.J	170.DJ		41.J				320.J	8000	640.DJ
Anthracene											960	920.DJ	230.J					320.J		
Benzo(a)anthene																				
Benzo(a)anthracene											5700	2900.D		270.J				3400	49000	31000.D
Benzo(a)pyrene											4300	2800.D	390.J	130.J				1600	18000	27000.D
Benzo(b)fluoranthene											6200	3300.D	860	340.J				2400	14000	36000.D
Benzo(k)fluoranthene											2000	2700.D	550					1700	44000	20000.D
Benzo(g,h,i)perylene											2000	1800.DJ	240.J	78.J				950	13000	
bis(2-ethylhexyl)phthalate		1.J	3.J	2.J		1.J	8.J			3.J	560.B	380.DBJ	380.BJ	350.BJ		65.BJ	46.BJ	5200.B		
Butylbenzylphthalate											220.J		85.J		53.J	130.J				
Carbozole											2200	2800.DB	290.BJ					96.BJ	15000.B	39000.DB
Chrysene																				
2-Chlorophenol													2100							
4-Chloro-3-methylphenol													2500	2800						
Chrysene											3100	2400.D		280.J				2700	27000	28000.D
Diethylphthalate							1.J									24.J		8200		
Dimethylphthalate																		120.J		
Di-n-butylphthalate		3.BJ	2.BJ	2.BJ	2.BJ	2.BJ	3.BJ	3.BJ	2.BJ	1.BJ	160.BJ	250.DBJ	58.BJ		96.BJ	59.BJ	53.BJ			1900.DBJ
Dibenzofuran											480	500.DJ		16.J				170.J	8900	10000.DJ
Dibenz(a,h)anthracene											1200	690.DJ	150.J						3700	8500.DJ
Di-n-Octylphthalate																	32.J			
1,3- Dichlorobenzene																				
1,4-Dichlorobenzene									4.J					1200						
2,4-Dinitrotoluene													1400	1500						
2,6-Dinitrotoluene																				

Notes:

DL - Indicates sample or extract was reanalyzed at a high dilution factor.

MS - Indicates sample was a matrix spike.

MSD - Indicates sample was a matrix spike duplicate.

Valley Park Site - Baton Rouge, Louisiana **Volatiles & Semi-volatiles**

Sample Analyses Summary Table **Numbers FT201 - FT215DL**

Lab Number	**Retention**	FT201	FT202	FT203	FT204	FT205	FT206	FT207	FT208	FT209	FT210	FT210DL	FT210MS	FT210MSD	FT211	FT212	FT213	FT214	FT215	FT215DL
Sample Num	**Time**	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8	SW-9	S-1	S-1	S-1	S-1	S-2	S-3	S-4	S-5	S-6	S-6
Matrix		Water	Water	Water	Water	Water	Water	Water	Water	Water	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Conc. Units		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Fluoranthene											11000	7000.D	1800					7300	58000	
Fluorene											570	700.DJ	110.J	24.J				170.J	17000	20000.D
Indeno(1,2,3-cd)pyrene											2400	1600. DJ	240.J	75.J				930	14000	14000.D
2-Methylnapththalene									1.J		150.J	150.DJ						120.J	5000	6500.DJ
4-Methylphenol																			320.J	
Methylnaphthalene																				
Naphthalene											280J.	270.DJ		21.J				62.J	9600	13000.D
N-Nitroso-di-n-propylamine													1600	1600						
N-Nitrosodiph-enylamine (1)									1.J									430.J		
4-Nitrophenol													960.J	2300						
Pentachlorophenol													1800	2200						
Phenanthrene											10000	8200.D	1300					4300	79000	
Phenol													2100	2100						
Pyrene											12000	6900.D	3700	2800				9900	84000	
1,2,4-Trichlorobenzene													1400	1400						
Unknown Chlorinated	5.2					10.J														
Unknown	5.7					14.J														
Unknown	5.8	4.BJ	11.BJ		4.J			4.BJ				700.DBJ			540.BJ					
Unknown	5.9				2.BJ				5.BJ										820.J	
Unknown	6.0										860.BJ					800.BJ	900.BJ			
Unknown C10H18 MW=138	6.0				3.J			4.J												
Unknown	6.1											2000.DBJ			980.BJ			1320.J	480.BJ	
Unknown C10H18 MW=152	6.1								3.BJ											
Unknown	6.2																480.BJ			
Unknown	6.3										1300.BJ					1240.BJ		840.J		
Unknown	6.4										460.J					400.J				
2-Propanol, 1-(2-Methoxy-1-M)	6.7	7.NJ																		
2-Propanol, 1-(2-Methoxy-1-M)	6.8		7.NJ																	
Unknown	7.1															240.J	128.J			
Unknown C10H18 MW=138	7.1																			
Unknown	7.2	3.J	2.J																	
Unknown	7.5	2.J																		
Unknown	7.6		6.J		5.J															
Unknown	7.9										2400.J					1400.BJ	1940.BJ			

Notes:

DL - Indicates sample or extract was reanalyzed at a high dilution factor.

MS - Indicates sample was a matrix spike.

MSD - Indicates sample was a matrix spike duplicate.

Valley Park Site - Baton Rouge, Louisiana | **Volatiles & Semi-volatiles**

Sample Analyses Summary Table | **Numbers FT201 - FT215DL**

Lab Number	**Retention**	FT201	FT202	FT203	FT204	FT205	FT206	FT207	FT208	FT209	FT210	FT210DL	FT210MS	FT210MSD	FT211	FT212	FT213	FT214	FT215	FT215DL
Sample Num	**Time**	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8	SW-9	S-1	S-1	S-1	S-1	S-2	S-3	S-4	S-5	S-6	S-6
Matrix		Water	Water	Water	Water	Water	Water	Water	Water	Water	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Conc. Units		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Unknown C10H16O MW=152	8.6								8.J	6.J										
Unknown	8.9					13.J														
Unknown	9.2					12.J														
Unknown Aromatic MW=142	9.3								7.J											
Unknown	9.4									5.J										
Unknown Aromatic MW=130	9.6																		1440.J	
Unknown	10.2					2.J														
Unknown	10.4								4.J	4.J										
Unknown Aromatic	10.4		3.J																	
Unknown Aromatic MW=135	10.7																	2400.J		
Unknown	10.9											600.DJ								
Unknown	11.1									3.J	300.J									
Unknown	11.2								4.J											
Phenol, (1,1-Dimethylethyl)	11.5								18.J	17.J										
Naphthalene,1-Methyl-	11.9										92.NJ									
Unknown Aromatic MW=142	11.9								5.J											
Unknown	12.0					4.J														
Naphthalene, 1-Methyl	12.0																			2600.DJ
Naphthalene, 1-Methyl	12.1																		5200.J	
Unknown	12.3	4.J																		
Unknown	12.4		6.J																	
Unknown Halogenated	12.7		5.J																	
1,1'-Biphenyl	13.2																		2200.NJ	
Unknown	13.2					5.J														
Naphthalene, Dimethyl-	13.8																		2800.J	
Unknown C10H18 MW=138	13.9																			
Unknown	13.9		6.J	3.J																
Unknown Hydrocarbon	13.9	3.J						3.J												
Unknown Hydrocarbon	14.0				3.J															
Unknown Hydrocarbon	14.1									2.J										
Unknown Hydrocarbon	14.2														110.J					
Unknown	14.8					3.J														
Unknown Aromatic	14.9	2.J	3.J																	
Unknown	15.6																			

Notes:

DL - Indicates sample or extract was reanalyzed at a high dilution factor.
MS - Indicates sample was a matrix spike.
MSD - Indicates sample was a matrix spike duplicate.

Valley Park Site - Baton Rouge, Louisiana **Volatiles & Semi-volatiles**

Sample Analyses Summary Table **Numbers FT201 - FT215DL**

Lab Number	Retention	FT201	FT202	FT203	FT204	FT205	FT206	FT207	FT208	FT209	FT210	FT210DL	FT210MS	FT210MSD	FT211	FT212	FT213	FT214	FT215	FT215DL
Sample Num	Time	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8	SW-9	S-1	S-1	S-1	S-1	S-2	S-3	S-4	S-5	S-6	S-6
Matrix		Water	Water	Water	Water	Water	Water	Water	Water	Water	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Conc. Units		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Unknown	15.6	7.BJ																		
Unknown	15.7								3.BJ											
Phenol, Tetrame-Methylbutyl	15.8		6.J																	
Unknown	15.8									3.BJ										
Dibenzofuran, 4-Methyl-	16.5																			4000.DJ
Unknown Aromatic	16.5			3.J																
Unknown Aromatic	16.7					9.J			10.J	11.J										
Unknown Aromatic	17.4								13.J											
Unknown Aromatic	17.5									19.J										
Dibenzothiophene	18.1																			6800.DJ
Caffeine	18.8	4.NJ	37.NJ																	
Unknown Aromatic	18.9					4.J														
Unknown Hydrocarbon	18.9		12.J																	
Hexadecanoic Acid	19.8		24.NJ																	
Unknown Adipate	19.0														114.J					
Unknown Aromatic	19.0								5.J	4.J										
Unknown Hydrocarbon	19.0																			
Unknown P.A.H. MW=192	19.7											720.DJ								8600.DJ
Unknown P.A.H. MW=192	19.7											760.DJ								
Unknown P.A.H. MW=192	19.8																			7200.DJ
Hexadecanoic Acid	19.8		24.NJ																	
Unknown	19.9																340.J			
Unknown P.A.H.	20.0											1020.DJ								14000.DJ
Hexadecanoic Acid	20.1																260.NJ			
Unknown P.A.H. MW=192	20.1																		7200.J	
Unknown P.A.H. MW=192	20.2																		7200.J	
Unknown P.A.H.	20.2										1420.J									
Unknown Aromatic	20.3																		7200.J	
Hexadecanoic Acid	20.5																	4200.NJ		
Naphthalene, 2-Phenyl-	20.5											1040.DNJ								
Naphthalene, 2-Phenyl-	20.7										680.NJ									
Naphthalene, 2-Phenyl-	20.8																		3800.NJ	
Unknown	20.8		20.J																	
Unknown Aromatic	21.2																		3400.J	

Notes:

DL - Indicates sample or extract was reanalyzed at a high dilution factor.

MS - Indicates sample was a matrix spike.

MSD - Indicates sample was a matrix spike duplicate.

Valley Park Site - Baton Rouge, Louisiana **Volatiles & Semi-volatiles**

Sample Analyses Summary Table **Numbers FT201 - FT215DL**

Lab Number	**Retention**	FT201	FT202	FT203	FT204	FT205	FT206	FT207	FT208	FT209	FT210	FT210DL	FT210MS	FT210MSD	FT211	FT212	FT213	FT214	FT215	FT215DL
Sample Num	**Time**	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8	SW-9	S-1	S-1	S-1	S-1	S-2	S-3	S-4	S-5	S-6	S-6
Matrix		Water	Water	Water	Water	Water	Water	Water	Water	Water	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Conc. Units		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Unknown	21.4		17.J																	
Unknown	21.8											1760.DJ								
Unknown	22.2										4800.J									
Unknown Aromatic	22.2								10.J											
Unknown Aromatic	22.3									11.J										
Unknown	22.4																	13000.J		
Unknown Aromatics	22.5																			
Octadecanoic Acid	22.6																	6400.NJ		
Unknown Hydrocarbon	22.8																	4400.J		
Unknown Organics	22.8					3900.J														
Unknown P.A.H. MW=216	23.0											480.DJ								
Unknown P.A.H. MW=216	23.1																			9600.DJ
Unknown P.A.H. MW=216	23.2																			5600.DJ
Unknown P.A.H. MW=216	23.3										620.J									
Unknown P.A.H. MW=216	23.5																		5000.J	
Unknown P.A.H. MW=216	23.6										520.J									
Unknown Hydrocarbon	23.7																186.J			
Unknown P.A.H. MW=216	23.7																		6200.J	
Unknown P.A.H.	23.8																		3200.J	
Unknown Organics	23.9								3000.J	240.J										
Unknown	24.0					2.J														
Unknown Aromatics	24.0																			
Unknown	24.2	7.J	18.J	9.J																
Unknown Aromatics	24.2					2.J														
Unknown	24.3					5.J.														
Unknown	24.4								2.J	5.J										
Unknown Adipate	24.6																	36000.J		
Unknown P.A.H. MW=230	24.7										420.J									
Unknown	25.0			3.J																
Unknown P.A.H. MW=230	25.0										420.J.									
Unknown P.A.H. MW=217	26.0																			3000.DJ
Unknown Alkane	26.2																	2800.J		
Unknown P.A.H. MW=242	26.4																			4400.DJ
Unknown	26.8																			5800.DJ

Notes:

DL - Indicates sample or extract was reanalyzed at a high dilution factor.

MS - Indicates sample was a matrix spike.

MSD - Indicates sample was a matrix spike duplicate.

Valley Park Site - Baton Rouge, Louisiana **Volatiles & Semi-volatiles**

Sample Analyses Summary Table **Numbers FT201 - FT215DL**

Lab Number	Retention	FT201	FT202	FT203	FT204	FT205	FT206	FT207	FT208	FT209	FT210	FT210DL	FT210MS	FT210MSD	FT211	FT212	FT213	FT214	FT215	FT215DL
Sample Num	Time	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-8	SW-9	S-1	S-1	S-1	S-1	S-2	S-3	S-4	S-5	S-6	S-6
Matrix		Water	Water	Water	Water	Water	Water	Water	Water	Water	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Conc. Units		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Unknown Alkane	26.9														1200.J					
Unknown Alkane	27.0																	2800.J		
Unknown UnresolvedHydrocarbon	27.4														34000.J					
Unknown Alkane	27.9																	1740.J		
Unknown P.A.H. MW=252	28.6																			3400.DJ
Unknown Alkane	29.0																	1320.J		
Unknown P.A.H. MW=252	29.1																		1140.J	
Unknown	29.2																102.J			
Unknown P.A.H. MW=252	29.2											1160.DJ								13000.DJ
Unknown	29.3																94.J			
Unknown P.A.H. MW=252	29.7																		3400.J	
Unknown P.A.H. MW=252	29.8										320.J									
Unknown P.A.H. MW=252	30.2																		1480.J	
Unknown P.A.H. MW=266	30.2																			2800.DJ
Unknown Alkane	30.2																	1060.J.		
Unknown	30.7							2.J												
Unknown Alkane	30.7														920.J					
Unknown	30.9				3.J															
Unknown Alkane	31.4											960.DJ								
Unknown Natural Product	31.5		10.J																	
Unknown	32.1																	560.J		
Unknown NaturalProduct	32.2		15.J								108.J									
Unknown	32.2	2.J																		
Unknown Alkane	33.3																	660.J		
Unknown Natural Product	34.8		4.J																	
Unknown P.A.H. MW=278	34.1																		400.J	
Unknown	35.0														152.J					
Unknown	35.4																840.J			
Unknown Alkane	35.4														820.J					
Unknown Alkane	35.5																	560.J		
Unknown Natural Product	35.6																	540.J		
Unknown P.A.H. MW=278	35.6																		700.J	

Notes:
DL - Indicates sample or extract was reanalyzed at a high dilution factor.
MS - Indicates sample was a matrix spike.
MSD - Indicates sample was a matrix spike duplicate.

Valley Park Site - Baton Rouge, Louisiana **Volatiles & Semi-volatiles**

Sample Analyses Summary Table **Numbers FT216 - FT233**

Lab Number	Retention	FT 216	FT 217	FT 218	FT 219	FT 220	FT 221	FT 222	FT 223	FT 224	FT 225	FT 226	FT 227	FT 228	FT 229	FT 230	FT 231	FT 232	FT 233
Sample Num	Time	S-7	SW-10	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	GW-1	GW-2	GW-3	GW-4	GW-6	GW-5	GW-7
Matrix		Soil	Water	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Water	Water	Water	Water	Water	Water	Water
Conc. Units		UG/KG	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
VOLATILES																			
Acetone		11		5. J		5. J		19		30	4. J								
2-Butanone																			
Chlorobenzene		18. J																	
Disulfide, Dimethyl		18. J																	
SEMI-VOLATILES																			
Acenaphthene																			
Acenaphthylene																			
Anthracene					38. J														
Benzo(a)anthene																			
Benzo(a) anthracene		34. J			130. J	35. J	300. J				67. J	80. J							
Benzo(a)pyrene					83. J	29. J	140. J				56. J	63. J							
Benzo(b) fluoranthene		38. J			140. J	50. J	300. J				160. J	150. J							
Benzo(k) fluoranthene		41. J			160. J	50. J	190. J												
Benzo(g,h,i) perylene							220. J												
bis(2-ethylhexyl)-phthalate		190. BJ		31. BJ	130. BJ	52. BJ		220. BJ	160. BJ	300. BJ		63. BJ							
Butylbenzylphthalate		44. J						43. J	59. J										
Carbazole					53. BJ						24. BJ	20. BJ							
Chrysene		35. J			130. J	45. J	290. J				82. J	78. J							
Di-n-butylphthalate		54. BJ	3. BJ	52. BJ	96. BJ	60. BJ	48. BJ	86. BJ	83. BJ		54. BJ	67. BJ	2. BJ	2. BJ	1. BJ	1. BJ	1. BJ	2. BJ	2. BJ
Di-n-Octylphthalate					27. J	32. J	65. J	68. J	68. J		290. J	57. J							
Dibenzofuran							25. J												
1,4-Dichlorobenzene							79. J												
Diethylphthalate					29. J	23. J		57. J	53. J	32. J	26. J	27. J							
Fluoranthene		61. J			270. J	77. J	390. J				170. J	160. J							
Fluorene					27. J														
Indeno(1,2,3-cd)pyrene							170. J				31. J								
2-Methylnaphthalene							44. J												
Naphthalene							43. J												
Phenanthrene		40. J		22. J	210. J	47. J	290. J				91. J	80. J							
Pyrene		62. J			200. J	64. J					150. J	140. J							
Unknown	5.8								920.BJ			1360.J							14.BJ

Notes:

DL - Indicates sample or extract was reanalyzed at a high dilution factor.

MS - Indicates sample was a matrix spike.

MSD - Indicates sample was a matrix spike duplicate.

Valley Park Site - Baton Rouge, Louisiana **Volatiles & Semi-volatiles**

Sample Analyses Summary Table **Numbers FT216 - FT233**

Lab Number	Retention	FT 216	FT 217	FT 218	FT 219	FT 220	FT 221	FT 222	FT 223	FT 224	FT 225	FT 226	FT 227	FT 228	FT 229	FT 230	FT 231	FT 232	FT 233
Sample Num	Time	S-7	SW-10	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	GW-1	GW-2	GW-3	GW-4	GW-6	GW-5	GW-7
Matrix		Soil	Water	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Water	Water	Water	Water	Water	Water	Water
Conc. Units		UG/KG	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Unknown	5.9		27. BJ					720. BJ					7. BJ		11. BJ	21. BJ	13. BJ	8. J	
Unknown	6.0	620. BJ		900. BJ		1360. BJ				198. BJ	1160. BJ								
Unknown	6.1							700. BJ	660. BJ										
Unknown C10H18 MW=138	6.1		3. BJ												4. BJ	4. BJ	3. BJ		
Unknown	6.2	640. BJ		500. BJ		520. BJ				200. BJ	400. BJ								
Unknown	6.3						1660. J												
Unknown	6.4	220. J								110. J	200. J								
2-PROPANOL, 1-(2-METHOXY-1-M	6.7																		
2-PROPANOL, 1-(2-METHOXY-1	6.8																		
Unknown	7.1							2400. J	1140. J										
Unknown C10H18 MW=138	7.1														3. J	3. J			
Unknown	7.2	300. J								980. J	420. J								
Unknown	7.5																		
Unknown	7.6																		
Unknown	7.8				2800. J		2400. J	3400. BJ	2800. BJ			2400. BJ							
Unknown	7.9	1800. BJ				2600. BJ				1340. BJ	3000. BJ								
Unknown	9.7						420.J												
Unknown	9.8										140. J								
Unknown Aromatic	10.4																		
Unknown Aromatic MW=135	10.7						780. J												
Unknown	11.1	156. J																	
Unknown	12.3																		
Unknown	12.4		2. J																
Unknown	12.6						196. J	154. J	194. J										
Unknown Hydrocarbon	13.9																		2. J
Unknown MW=220	14.1		3. BJ																
Unknown Hydrocarbon	14.1								192. BJ										
Unknown Hydrocarbon	14.2				240. BJ			200. J				148. BJ							
Unknown	14.3									114. J									
Unknown Hydrocarbon	14.3			90. BJ															
Unknown MW=220	14.6		6. J																
Unknown Aromatic	14.9																		
Unknown	15.6																		8. BJ
Unknown Aromatic	15.6						320. J												

Notes:

DL - Indicates sample or extract was reanalyzed at a high dilution factor.

MS - Indicates sample was a matrix spike.

MSD - Indicates sample was a matrix spike duplicate.

Valley Park Site - Baton Rouge, Louisiana

Sample Analyses Summary Table

Volatiles & Semi-volatiles

Numbers FT216 - FT233

Lab Number	Retention	FT 216	FT 217	FT 218	FT 219	FT 220	FT 221	FT 222	FT 223	FT 224	FT 225	FT 226	FT 227	FT 228	FT 229	FT 230	FT 231	FT 232	FT 233
Sample Num	Time	S-7	SW-10	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	GW-1	GW-2	GW-3	GW-4	GW-6	GW-5	GW-7
Matrix		Soil	Water	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Water	Water	Water	Water	Water	Water	Water
Conc. Units		UG/KG	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Unknown	15.7		10. BJ										3. BJ		2. BJ	3. BJ	2. BJ	3. J	
Phenol, Tetrame- Methylbutyl	15.8																		
Unknown Alkane Coeluting W/U	15.9						320. J												
Unknown Hydrocarbon	16.8							178. J	220. J										
Unknown Alkane	17.1							380. J	620. J										
Unknown Alkane	17.2									136. J									
Tetradecanoic Acid	17.8							640. NJ	540. NJ										
Tetradecanoic Acid	17.9									420. NJ									
Unknown MW=234	17.9		2. J																
Pentadecanoic Acid Coeluting	18.5				240. J														
Pentadecanoic Acid	18.6					220. NJ													
Unknown	18.7							260. J	340. J										
Caffeine	18.8																		
Unknown	18.8									122. J									
Unknown Hydrocarbon	18.9																		
Hexadecanoic Acid	19.8																		
Unknown	19.9	300. J							3200. J		158. J								
Unknown Hydrocarbon	19.9							4000. J											
Hexadecanoic Acid	20.0											280. NJ							
Unknown	20.0					174. J													
Unknown	20.0			240. J		400. J													
Hexadecanoic Acid	20.1	380. NJ		440. NJ	540. NJ						520. NJ								
Hexadecanoic Acid	20.2					780. NJ				1620. NJ									
Unknown Hydrocarbon	20.6					146. J					240. J								
Unknown	20.8																		
Unknown	21.1					94. J													
Unknown	21.4																		
Unknown	21.7							360. J	360. J										
Unknown	21.8									420. J									
Unknown	22.0	400. J		280. J				2200. J	2000. J										
Unknown Hydrocarbon	22.0					340. J					240. J								
Octadecanoic Acid	22.1				300. NJ														
Unknown	22.1									2400. J									
Octadecanoic Acid	22.2			96. NJ							200. NJ								

Notes:

DL - Indicates sample or extract was reanalyzed at a high dilution factor.

MS - Indicates sample was a matrix spike.

MSD - Indicates sample was a matrix spike duplicate.

Valley Park Site - Baton Rouge, Louisiana **Volatiles & Semi-volatiles**

Sample Analyses Summary Table **Numbers FT216 - FT233**

Lab Number	Retention	FT 216	FT 217	FT 218	FT 219	FT 220	FT 221	FT 222	FT 223	FT 224	FT 225	FT 226	FT 227	FT 228	FT 229	FT 230	FT 231	FT 232	FT 233
Sample Num	Time	S-7	SW-10	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	GW-1	GW-2	GW-3	GW-4	GW-6	GW-5	GW-7
Matrix		Soil	Water	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Water	Water	Water	Water	Water	Water	Water
Conc. Units		UG/KG	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Unknown	22.4						940. J												
Unknown	23.6							148. J											
Unknown Aromatic	23.7						1520. J												
Unknown	23.7									260. J									
Unknown	23.7									420. J									
Unknown	24.2																		
Unknown	24.3							1700. J											
Unknown Alkane	24.3				188. J														
Unknown	24.6				186. J							170. J							
Unknown	24.7					88. J					142. J								
Unknown Alkane	25.1								114. J										
Unknown Alkane	25.2											260. J							
Unknown	25.3	540. J				220. J													
Unknown Alkane	25.3			440. J			1080. J			340. J	200. J								
Unknown Alkane	26.1								520. J		82. J								
Unknown	26.4	136. J																	
Unknown Alkane	26.5							380. J											
Unknown Phthalate	26.7										134. J								
Unknown Alkane	26.8								140. J			320. J							
Unknown Alkane	26.9			340. J	620. J						240. J								
Unknown Alkane	27.0					220. J	1040. J												
Unknown	27.1	174. J																	
Unknown Alkane	27.2									380. J									
Unknown	27.5				600. J														
Unknown Alkane	27.8				240. J														
Unknown Alkane	28.6										540. J								
Unknown Alkane	28.8				1620. J							150. J							
Unknown Alkane	28.9										340. J								
Unknown Alkane	29.0					520. J													
Unknown Alkane	29.9								920. J										
Unknown Alkane	31.4											300. J							
Unknown Alkane	31.5				1940. J														
Unknown Natural Product	31.5																		
Unknown	31.6	146. J		196. J		760. J				146. J									

Notes:

DL - Indicates sample or extract was reanalyzed at a high dilution factor.

MS - Indicates sample was a matrix spike.

MSD - Indicates sample was a matrix spike duplicate.

Valley Park Site - Baton Rouge, Louisiana **Volatiles & Semi-volatiles**

Sample Analyses Summary Table **Numbers FT216 - FT233**

Lab Number	Retention	FT 216	FT 217	FT 218	FT 219	FT 220	FT 221	FT 222	FT 223	FT 224	FT 225	FT 226	FT 227	FT 228	FT 229	FT 230	FT 231	FT 232	FT 233
Sample Num	Time	S-7	SW-10	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	GW-1	GW-2	GW-3	GW-4	GW-6	GW-5	GW-7
Matrix		Soil	Water	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Water	Water	Water	Water	Water	Water	Water
Conc. Units		UG/KG	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
Unknown Hydrocarbon	31.6				740. J														
Unknown Alkane	31.7						440. J												
Unknown PAH	32.1	136. J																	
Unknown	32.2																		
Unknown Natural Product	32.2																		
Unknown	32.6								240. J			280. J							
Unknown Natural Product	32.9	160. J				300. J													
Unknown	33.5	98. J																	
Unknown Alkane	34.6								1200. J										
Unknown Natural Product	34.7				1900. J							380. J							
Unknown Natural Product	34.8																		
Unknown Natural Product	34.9			240. J															
Unknown Natural Product	35.0					540. J													
Unknown	35.1							1000. J	1180. J										
Unknown Alkane	35.2				2000. J							480. J							
Unknown Alkane	35.4	1760. J		340. J															
Unknown	35.4											400. J							
Unknown	35.5									1140. J									
Unknown	35.6			150. J															
Unknown Natural Product	35.8				2000. J														

Notes:

DL - Indicates sample or extract was reanalyzed at a high dilution factor.

MS - Indicates sample was a matrix spike.

MSD - Indicates sample was a matrix spike duplicate.

INORGANIC TARGET ANALYTE LIST (TAL)

Analyte	Contract Required Detection Limit (ug/L) (1,2)
Aluminum	200
Antimony	60
Arsenic	10
Barium	200
Beryllium	5
Cadmium	5
Calcium	5000
Chromium	10
Cobalt	50
Copper	25
Iron	100
Lead	3
Magnesium	5000
Manganese	15
Mercury	0.2
Nickel	40
Potassium	5000
Selenium	5
Silver	10
Sodium	5000
Thallium	10
Vanadium	50
Zinc	20
Cyanide	10

(1) Subject to the restrictions specified in the first page of Part G, Section IV of Exhibit D (Alternate Methods - Catastrophic Failure) any analytical method specified in SOW Exhibit D may be utilized as long as the documented instrument or method detection limits meet the Contract Required Detection Limit (CRDL) requirements. Higher detection limits may only be used in the following circumstance:

If the sample concentration exceeds five times the detection limit of the instrument or method in use, the value may be reported even though the instrument or method detection limit may not equal the Contract Required Detection Limit. This is illustrated in the example below:

For lead:

Method in use = ICP
Instrument Detection Limit (IDL) = 40
Sample concentration = 220
Contract Required Detection Limit (CRDL) = 3

TARGET COMPOUND LIST (TCL) AND CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)

Volatiles	CAS Number	Quantitation Limits* Water ug/L	Low Soil ug/Kg	Med. Soil ug/Kg	On Column (ng)
1. Chloromethane	74-87-3	10	10	1200	(50)
2. Bromomethane	74-83-9	10	10	1200	(50)
3. Vinyl Chloride	75-01-4	10	10	1200	(50)
4. Chloroethane	75-00-3	10	10	1200	(50)
5. Methylene Chloride	75-09-2	10	10	1200	(50)
6. Acetone	67-64-1	10	10	1200	(50)
7. Carbon Disulfide	75-15-0	10	10	1200	(50)
8. 1,1-Dichloroethene	75-35-4	10	10	1200	(50)
9. 1,1-Dichloroethane	75-34-3	10	10	1200	(50)
10. 1,2-Dichloroethene (total)	540-59-0	10	10	1200	(50)
11. Chloroform	67-66-3	10	10	1200	(50)
12. 1,2-Dichloroethane	107-06-2	10	10	1200	(50)
13. 2-Butanone	78-93-3	10	10	1200	(50)
14. 1,1,1-Trichloroethane	71-55-6	10	10	1200	(50)
15. Carbon Tetrachloride	56-23-5	10	10	1200	(50)
16. Bromodichloromethane	75-27-4	10	10	1200	(50)
17. 1,2-Dichloropropane	78-87-5	10	10	1200	(50)
18. cis-1,3-Dichloropropene	10061-01-5	10	10	1200	(50)
19. Trichloroethene	79-01-6	10	10	1200	(50)
20. Dibromochloromethane	124-48-1	10	10	1200	(50)
21. 1,1,2-Trichloroethane	79-00-5	10	10	1200	(50)
22. Benzene	71-43-2	10	10	1200	(50)
23. trans-1,3-Dichloropropene	10061-02-6	10	10	1200	(50)
24. Bromoform	75-25-2	10	10	1200	(50)
25. 4-Methyl-2-pentanone	108-10-1	10	10	1200	(50)
26. 2-Hexanone	591-78-6	10	10	1200	(50)
27. Tetrachloroethene	127-18-4	10	10	1200	(50)
28. Toluene	108-88-3	10	10	1200	(50)
29. 1,1,2,2-Tetrachloroethane	79-34-5	10	10	1200	(50)
30. Chlorobenzene	108-90-7	10	10	1200	(50)
31. Ethyl Benzene	100-41-4	10	10	1200	(50)
32. Styrene	100-42-5	10	10	1200	(50)
33. Xylenes (Total)	1330-20-7	10	10	1200	(50)

* Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis as required by the contract, will be higher.

TARGET COMPOUND LIST (TCL) AND CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)

Semivolatiles	CAS Number	Quantitation Limits* Water ug/L	Low Soil ug/Kg	Med. Soil ug/Kg	On Column (ng)
34. Phenol	108-95-2	10	330	10000	(20)
35. bis(2-Chloroethyl) ether	111-44-4	10	330	10000	(20)
36. 2-Chlorophenol	95-57-8	10	330	10000	(20)
37. 1,3-Dichlorobenzene	541-73-1	10	330	10000	(20)
38. 1,4-Dichlorobenzene	106-46-7	10	330	10000	(20)
39. 1,2-Dichlorobenzene	95-50-1	10	330	10000	(20)
40. 2-Methylphenol	95-48-7	10	330	10000	(20)
41. 2,2'-oxybis (1-Chloropropane)#	108-60-1	10	330	10000	(20)
42. 4-Methylphenol	106-44-5	10	330	10000	(20)
43. N-Nitroso-di-n-propylamine	621-64-7	10	330	10000	(20)
44. Hexachloroethane	67-72-1	10	330	10000	(20)
45. Nitrobenzene	98-95-3	10	330	10000	(20)
46. Isophorone	78-59-1	10	330	10000	(20)
47. 2-Nitrophenol	88-75-5	10	330	10000	(20)
48. 2,4-Dimethylphenol	105-67-9	10	330	10000	(20)
49. bis(2-Chloroethoxy) methane	111-91-1	10	330	10000	(20)
50 2,4-Dichlorophenol	120-83-2	10	330	10000	(20)
51. 1,2,4-Trichlorobenzene	120-82-1	10	330	10000	(20)
52. Naphthalene	91-20-3	10	330	10000	(20)
53. 4-Chloroaniline	106-47-8	10	330	10000	(20)
54. Hexachlorobutadiene	87-68-3	10	330	10000	(20)
55. 4-Chloro-3-methylphenol	59-50-7	10	330	10000	(20)
56. 2-Methylnaphthalene	91-57-6	10	330	10000	(20)
57. Hexachlorocyclopentadiene	77-47-4	10	330	10000	(20)
58. 2,4,6-Trichlorophenol	88-06-2	10	330	10000	(20)
59. 2,4,5-Trichlorophenol	95-95-4	25	800	25000	(50)
60. 2-Chloronaphthalene	91-58-7	10	330	10000	(20)
61. 2-Nitroaniline	88-74-4	25	800	25000	(50)
62. Dimethylphthalate	131-11-3	10	330	10000	(20)
63. Acenaphthylene	208-96-8	10	330	10000	(20)
64. 2,6-Dinitrotoluene	606-20-2	10	330	10000	(20)
65. 3-Nitroaniline	99-09-2	25	800	25000	(50)
66. Acenaphthene	83-32-9	10	330	10000	(20)
67. 2,4-Dinitrophenol	51-28-5	25	800	25000	(50)
68. 4-Nitrophenol	100-02-7	25	800	25000	(50)

Previously known by the name bis(2-Chloroisopropyl) ether

Semivolatiles	CAS Number	Quantitation Limits* Water ug/L	Low Soil ug/Kg	Med. Soil ug/Kg	On Column (ng)
69. Dibenzofuran	132-64-9	10	330	10000	(20)
70. 2,4-Dinitrotoluene	121-14-2	10	330	10000	(20)
71. Diethylphthalate	84-66-2	10	330	10000	(20)
72. 4-Chlorophenyl-phenyl ether	7005-72-3	10	330	10000	(20)
73. Fluorene	86-73-7	10	330	10000	(20)
74. 4-Nitroaniline	100-01-6	25	800	25000	(50)
75. 4,6-Dinitro-2-methylphenol	534-52-1	25	800	25000	(50)
76. N-nitrosodiphenylamine	86-30-6	10	330	10000	(20)
77. 4-Bromophenyl-phenylether	101-55-3	10	330	10000	(20)
78. Hexachlorobenzene	118-74-1	10	330	10000	(20)
79. Pentachlorophenol	87-86-5	25	800	25000	(50)
80. Phenanthrene	85-01-8	10	330	10000	(20)
81. Anthracene	120-12-7	10	330	10000	(20)
82. Carbazole	86-74-8	10	330	10000	(20)
83. Di-n-butylphthalate	84-74-2	10	330	10000	(20)
84. Fluoranthene	206-44-0	10	330	10000	(20)
85. Pyrene	129-00-0	10	330	10000	(20)
86. Butylbenzylphthalate	85-68-7	10	330	10000	(20)
87. 3,3'-Dichlorobenzidine	91-94-1	10	330	10000	(20)
88. Benzo(a)anthracene	56-55-3	10	330	10000	(20)
89. Chrysene	218-01-9	10	330	10000	(20)
90. bis(2-Ethylhexyl)phthalate	117-81-7	10	330	10000	(20)
91. Di-n-octylphthalate	117-84-0	10	330	10000	(20)
92. Benzo(b)fluoranthene	205-99-2	10	330	10000	(20)
93. Benzo(k)fluoranthene	207-08-9	10	330	10000	(20)
94. Benzo(a)pyrene	50-32-8	10	330	10000	(20)
95. Indeno(1,2,3-cd)pyrene	193-39-5	10	330	10000	(20)
96. Dibenz(a,h)anthracene	53-70-3	10	330	10000	(20)
97. Benzo(g,h,i)perylene	191-24-2	10	330	10000	(20)

* Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis as required by the contract, will be higher.

TARGET COMPOUND LIST (TCL) AND CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)

		Quantitation Limits*		
Pesticides/Aroclors	CAS Number	Water ug/L	Soil ug/Kg	On Column (pg)
98. alpha-BHC	319-84-6	0.05	1.7	5
99. beta-BHC	319-85-7	0.05	1.7	5
100. delta-BHC	319-86-8	0.05	1.7	5
101. gamma-BHC (Lindane)	58-89-9	0.05	1.7	5
102. Heptachlor	76-44-8	0.05	1.7	5
103. Aldrin	309-00-2	0.05	1.7	5
104. Heptachlor epoxide	1024-57-3	0.05	1.7	5
105. Endosulfan I	959-98-8	0.05	1.7	5
106. Dieldrin	60-57-1	0.10	3.3	10
107. 4,4'-DDE	72-55-9	0.10	3.3	10
108. Endrin	72-20-8	0.10	3.3	10
109. Endosulfan II	33213-65-9	0.10	3.3	10
110. 4,4'-DDD	72-54-8	0.10	3.3	10
111. Endosulfan sulfate	1031-07-8	0.10	3.3	10
112. 4,4'-DDT	50-29-3	0.10	3.3	10
113. Methoxychlor	72-43-5	0.50	17.0	50
114. Endrin ketone	53494-70-5	0.10	3.3	10
115. Endrin aldehyde	7421-36-3	0.10	3.3	10
116. alpha-Chlordane	5103-71-9	0.05	1.7	5
117. gamma-Chlordane	5103-74-2	0.05	1.7	5
118. Toxaphene	8001-35-2	5.0	170.0	500
119. Aroclor-1016	12674-11-2	1.0	33.0	100
120. Aroclor-1221	11104-28-2	2.0	67.0	200
121. Aroclor-1232	11141-16-5	1.0	33.0	100
122. Aroclor-1242	53469-21-9	1.0	33.0	100
123. Aroclor-1248	12672-29-6	1.0	33.0	100
124. Aroclor-1254	11097-69-1	1.0	33.0	100
125. Aroclor-1260	11096-82-5	1.0	33.0	100

* Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis as required by the contract, will be higher.

There is no differentiation between the preparation of low and medium soil samples in this method for the analysis of Pesticides/Aroclors.

RAS ORGANIC DATA FLAGS

Under the column labeled "Q" for qualifier, flag each result with the specific Data Reporting Qualifiers listed below. The Contractor is encouraged to use additional flags or footnotes. The definition of such flags must be explicit and must be included in the SDG Narrative.

For reporting results to the USEPA, the following contract specific qualifiers are to be used. The seven qualifiers defined below are not subject to modification by the laboratory. Up to five qualifiers may be reported on Form I for each compound.

The seven EPA-defined qualifiers to be used are as follows:

U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For example, 10 U for phenol in water if the sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture. For example, if the sample had 24% moisture and a 1 to 10 dilution factor, the sample quantitation limit for phenol (330 U) would be corrected to

$$\frac{(330\ U)}{D} \times df \quad \text{where } D = \frac{100 - \%\ \text{moisture}}{100}$$

and df = dilution factor

For example, at 24% moisture, $D = \frac{100-24}{100} = 0.76$

$$\frac{(330\ U)}{.76} \times 10 = 4300\ U$$ rounded to the appropriate number of significant figures

For soil samples subjected to GPC clean-up procedures, the extract must be concentrated to 0.5 mL, and the sensitivity of the analysis is not compromised by the cleanup procedures. Therefore, the CRQL values in Exhibit C will apply to all samples, regardless of cleanup. However, if a sample extract cannot be concentrated to the protocol-specified volume (see Exhibit C), this fact must be accounted for in reporting the sample quantitation limit.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration of 3 ug/L is calculated, report it as 3J. The sample quantitation limit must be adjusted for dilution as discussed for the U flag.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results.

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns (see Form X) The lower of the two values is reported on Form I and flagged with an "P".

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag, instead use a laboratory-defined flag, discussed below.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified target compound.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. If one or more compounds have a response greater than full scale, except as noted in Exhibit D, the sample or extract must be diluted and re-analyzed according to the specifications in Exhibit D. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate copies of Form I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number. NOTE: For total xylenes, where three isomers are quantified as two peaks, the calibration range of each peak should be considered separately, e.g., a diluted analysis is not required for total xylenes unless the concentration of either peak separately exceeds 200 ug/L.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the "D" flag. This flag alerts data users that any discrepancies between the concentrations reported may be due to dilution of the sample or extract.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - Other specific flags may be required to properly define the results. If used, they must be fully described, and such description attached to the Sample Data Summary Package and the SDG Narrative. Begin by using "X". If more than one flag is required, use "Y" and "Z" as needed. If more than five qualifiers are required for a sample result, use the "X" flag to combine several flags, as needed. For instance, the "X" flag might combine the "A", "B", and "D" flags for some sample. The laboratory-defined flags are limited to the letters "X", "Y", and "Z".

The combination of flags "BU" or "UB" is expressly prohibited. Blank contaminants are flagged "B" only when they are detected in the sample.

RAS INORGANIC DATA FLAGS

Under the column labeled "Concentration", enter for each analyte either the value of the result (if the concentration is greater than or equal to the Instrument Detection Limit) or the Instrument Detection Limit for the analyte corrected for any dilutions (if the concentration is less than the Instrument Detection Limit).

Under the columns labeled "C", "Q", and "M", enter result qualifiers as identified below. If additional qualifiers are used, their explicit definitions must be included on the Cover Page in the Comments section.

FORM I-IN includes fields for three types of result qualifiers. These qualifiers must be completed as follows:

o C (Concentration) qualifier -- Enter "B" if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL). If the analyte was analyzed for but not detected, a "U" must be entered.

o Q qualifier -- Specified entries and their meanings are as follows:

E - The reported value is estimated because of the presence of interference. An explanatory note must be included under Comments on the Cover Page (if the problem applies to all samples) or on the specific FORM I-IN (if it is an isolated problem).

M - Duplicate injection precision not met.

N - Spiked sample recovery not within control limits.

S - The reported value was determined by the Method of Standard Additions (MSA).

W - Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance. (See Exhibit E.)

* - Duplicate analysis not within control limits.

+ - Correlation coefficient for the MSA is less than 0.995.

Entering "S", "W", or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

o M (Method) qualifier -- Enter:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for flame AA when Microwave Digestion is used
- "FM" for Furnace AA when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "CA" for Midi-Distillation spectrophotometric.
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered.
- "NR" if the analyte is not required to be analyzed.

ORGANIC HIGH CONCENTRATION DATA FLAGS

Under the column labeled "Q" for qualifier, flag each result with the specific Data Reporting Qualifiers listed below. The Contractor is encouraged to use additional flags or footnotes. The definition of such flags must be explicit and must be included in the Case Narrative.

For reporting results to the USEPA, the following contract specific qualifiers are to be used. The eight qualifiers defined below <u>are not</u> subject to modification by the laboratory. Up to five qualifiers may be reported on Form I for each compound.

The eight EPA-defined qualifiers to be used are as follows:

U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution. For example, 20 U for phenol if the sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 200 U.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral or GC/EC data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero. For example, if the sample quantitation limit is 10 mg/Kg, but a concentration of 3 mg/Kg is calculated, report it as 3J. The sample quantitation limit must be adjusted for dilution as discussed for the U flag.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified TCL compound.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will <u>not</u> apply to Aroclors analyzed by GC/EC methods. If one or more compounds have a response greater than full scale, the extract must be diluted and re-analyzed according to the specifications in Exhibit D. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate Forms I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and <u>all</u> concentration values reported on that Form I are flagged with the "D" flag.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

N - This flag identifies Aroclor or Toxaphene compounds where one or more of the peaks used for quantitation are more than two times the width of the corresponding peaks in the highest concentration calibration standard. It indicates an uncertainty in the quantitation for the compound other than those discussed under the "J" flag.

X - Other specific flags and footnotes may be required to properly define the results. In order to limit the number of laboratory-defined flags and not use such flags as may be part of the Agency's data review processes, the laboratory-defined flags are restricted to the three letters "X", "Y", and "Z". If used, they must be fully described and such description attached to the Sample Data Summary Package and the Case Narrative. If more than one is required, use "Y" and "Z", as needed. If more than five qualifiers are required for a sample result, use the "X" flag to combine several flags, as needed. For instance, the "X" flag might combine the "A", "B", and "D" flags for some samples.

The combination of flags "BU" or "UB" is expressly prohibited. Blank contaminants are flagged "B" only when they are also detected in the sample.

If analyses at two different dilution factors are required (see Exhibit D), follow the data reporting instructions given in Exhibit D and with the "D" and "E" flags above.

SCREENING SITE INSPECTION REPORT

APPENDIX C

VALLEY PARK SCHOOL
4510 BAWELL STREET
BATON ROUGE, LOUISIANA 70808
(LAD985170273)

VOLUME 2 OF 3

Prepared by

Tom Mayhall, Environmental Specialist
Additional Preparation: John Halk, Coordinator

The Louisiana Department of Environmental Quality
Inactive and Abandoned Sites Division

REFERENCES

No.	Name
1	Memorandum - Telephone Communication Record - the number of adult students using Administration building
2	Memorandum - TCR - the number of employees using the Administration building
3	Memorandum - TCR - number of people using the recreational facilities - also a table totaling the numbers of people using the site
4	Letter - from Capozzoli & Assoc.- Subsoil Analyses
5	Report - Preliminary Assessment
6	Analyses Report - DNR
7	Investigative Report - LSU
8	Analyses report - Gulf South Research Institute
9	Investigative Report - Cox and Walker
10	Technical Report - Arch Consulting - June 16, 1988
11	Technical Report - Arch Consulting - May 15, 1989
12	Water Analyses Report - West Paine Labs - May 15, 1990
13	Memorandum - LDEQ - SSI sampling event
14	Investigative Report - LDEQ - Indoor air quality
15	Report - SSI Workplan
16	Memorandum - LDEQ - Description landfill cap
17	Table - LDEQ - Tables used to determine population estimates
18	Memorandum - LDEQ - Discussion with USGS employee to determine ground water flow.
19	Memorandum - LDEQ - Discussion with U S Fish and Wildlife on 15-mile Pathway
20	Memorandum - LDEQ - Discussion with LA Wildlife & Fisheries - Discussion sensitive environments on 15-mile pathway
21	Memorandum - LDEQ - Discussion with BR Water Works
22	Memorandum - LDEQ - Permission to sample LSU water wells
23	Memorandum - LDEQ - Permission to sample individual water wells

24	Memorandum - LDEQ - Permission to collect samples from school grounds
25	Citation from: 40 CFR 141.11. Chapter 141: National Primary Drinking Water Standards
26	Citation from: 40 CFR 300. Revised. Table 2-3: Observed Release Criteria for Chemical Analysis
27	Shacklette, Hansford T. and Josephine G. Boerngen. "Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States." <u>U.S. Geological Survey Professional Paper 1270.</u> USGPO, Washington: 1984.

REFERENCE NO.

1

TELEPHONE COMMUNICATION RECORD

Staff person: Tom Mayhall TM

Date: March 6, 1991

Talked to: Mrs. C. Rupp
Steno 3

Company: Adult & Continuing Education Dept.
ph.929-5443

Site: Valley Park (ssi)

Subject: Nos. of students

Comments made: The adult (17 yrs.+) students number from 1000 to 1500. There were 1300 students for the month of January 1991.

REFERENCE NO.

2

TELEPHONE COMMUNICATION RECORD

Staff person: Tom Mayhall TM **Date: March 6, 1991**

Talked to: Mrs. Mary Gordon

Company: Valley Park Admin Ctr.

Site: Valley Park (ssi)

Subject: Worker nos.

Comments made: The no. of employees using the admin. building on a daily basis is aprox. 300.

REFERENCE NO.

3

TELEPHONE COMMUNICATION RECORD

Staff person: Tom Mayhall TM March 6, 1991

Talked to: Rochell Tomaszewski
Admin Clerk

Company: BREC

Site: Valley Park (ssi)

Subject: no people using facilities at Nairne Park

Comments made:

Aprox. 1500 people use the recreational center (gym) on a regular basis. In Feb. 1991 2900 people used the center.

Aprox. 300 people use the outdoor facilites monthly. The outdoor facilities include playground equipment and two baseball fields.

NOS. OF PEOPLE USING THE SITE (MONTHLY)

VALLEY PARK - ADMIN. BLDG	NAIRNE PARK	2931 VALLEY ST.	TOTAL
1300 STUDENTS	REC. CTR. 1500	EBR PUB WORKS 10	2810
300 EMPLOYEES	PLAYGROUND & BALL FIELD 300	HOME MAINT 17	617
		FINAL TOTAL	3,427.00

REFERENCE NO.

4

L IS J. CAPOZZOLI AND ASSOC TES, INC.
Consulting Engineers
4531 North Boulevard
Baton Rouge, Louisiana 70806

Dr. Louis J. Capozzoli, Jr.
PE, CEC

Telephones 921-2178
921-2131
Area Code 504

May 12, 1966

East Baton Rouge Parish School Board
c/o Desmond-Miremont & Associates
Union Federal Building
Baton Rouge, Louisiana

Re: Subsoil Analyses and Foundation Recommendations
Valley Park School Site

Gentlemen:

In accordance with the verbal authorization received from you in late April, 1966, we have done the necessary work on the above project and are submitting herein the results of our findings. The boring locations were obtained from your architects in late April and the borings taken in early May. Our engineering analyses follow, a description of our field and laboratory analyses is in Appendix A.

SOIL CONDITIONS

The soil conditions on this site are extremely poor from the foundation standpoint. The soil profile on figure 1 shows that the top 2 feet of soil consists of a clay fill. This overlies about 6 to 8 feet of garbage which then overlies about 5 feet of medium silty clay. At about the 15 foot depth is the very stiff pleistocene clay encountered over most of Baton Rouge.

FOUNDATION DESIGN

The buildings to be supported here are comparatively light one story structures. Even with these light structures, the sanitary fill cannot be used for any foundation support whatsoever. A foundation penetrating the fill and resting in the underlying pleistocene clay must be used.

Two types of foundations can be considered for this site. The first is a standard driven pile foundation which, with the exception of encountering obstructions in the fill, will present no problems. The second is a machine drilled cast in place straight sided shaft foundation. This will present many problems. The first is the necessity for casing the shaft excavation for the top 10 feet or more. The second is a limitation of the depths of the shafts to 25 feet because of silt layers encountered beyond this depth, especially in boring 6. Generally, the cost of casing a shaft excavation makes such a foundation uneconomical compared to a pile foundation; however, the variations that have occurred in labor rates and pile costs in this area in recent months may have changed this. The design should be made on the basis of using a certain load capacity pile and the use of a specific shaft with the same load capacity allowed as an alternate which can be selected by the contractor at no additional cost to the owner.

One of three types of piles can be used. These are Class 5 or Class 9 poles corresponding to ASA specification 05.1 latest revision or Class B timber piles conforming to ASTM specification D-25 latest revision. The Class 9 and Class 5 poles should be treated with creosote to retention of 8 pounds per cubic foot. The Class B piles should be treated with creosote to retention of 12 pounds per cubic foot. The allowable load capacity vs. pile length for each of these piles is shown on figure 2. All piles used shall be driven their full penetration into the soil. The selection of a pile hammer can be made by the contractor provided it is capable of driving the pile to the required depth without damaging the head. The piles driven as described herein will not require a load test.

A curve for two diameters of shafts with varying depths is shown on figure 3. Depending upon the pile loads, one of these shafts can be selected as an alternate by the successful bidder if he desires at no increased cost to the owner.

The entire building including all floor slabs must be pile supported. Any sewer lines that depend on gravity flow should either be pile supported or should be replaced by pressure lines that maintain their flow characteristics even after undergoing settlement. Sidewalks and roadways resting on the fill will undergo several inches of settlement. The roadways should be constructed of a flexible base material. A sand, gravel, clay base course with asphaltic concrete surfacing can best withstand the settlements.

SUMMARY

The sanitary land fill on this site necessitates the use of a timber pile foundation to support the buildings and floor slabs. If the contractor desires, he can substitute a drilled and cast in place straight sided shaft as described herein for any pile. Parking areas, sidewalks, and utility lines should be constructed with expectation of several inches or more of settlement occurring.

Very truly yours,

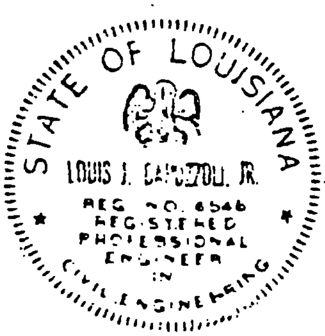
LOUIS J. CAPOZZOLI & ASSOCIATES, INC.

Louis J. Capozzoli Jr.

Dr. Louis J. Capozzoli, Jr.

By GPG.

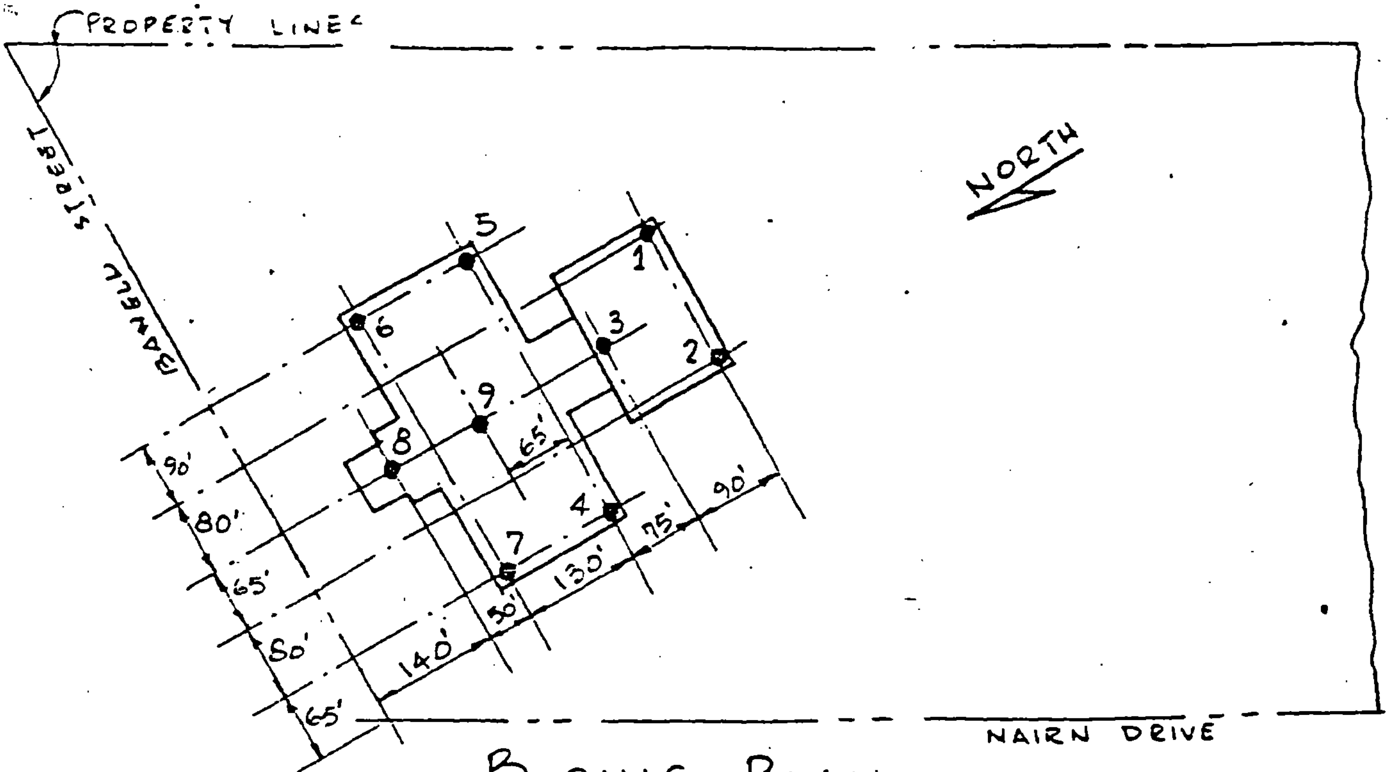
Dr.LJC,Jr./ph



APPENDIX A - FIELD AND LABORATORY ANALYSES

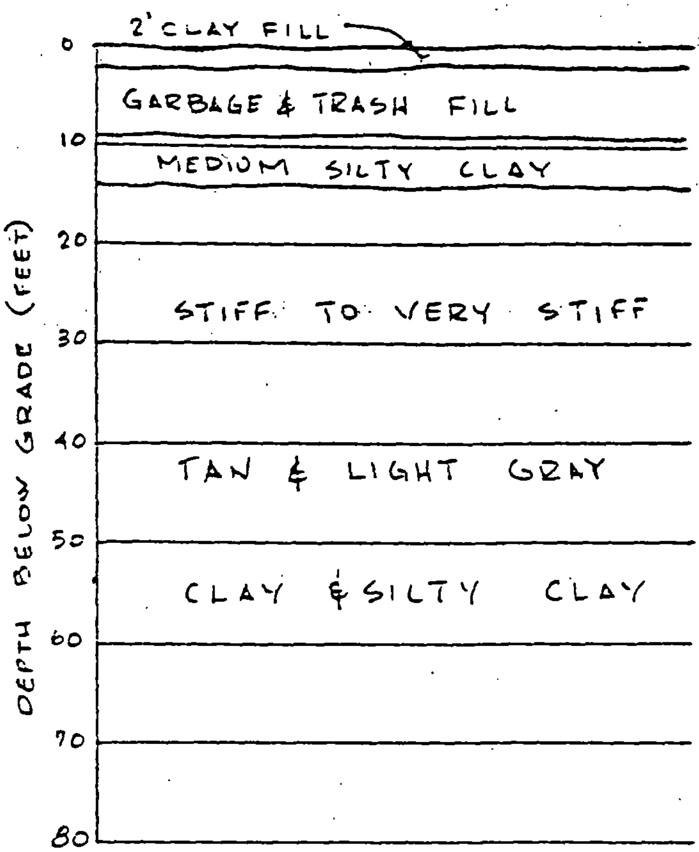
Nine borings were taken on the site at the locations selected by your architects and shown on the upper portion of figure 1. High quality undisturbed cla samples suitable for laboratory analyses were obtained on 5 foot centers with a 3 inch OD thinwalled sampler. The sand soils were sampled with a 2 inch OD splitspoon. The total lineal footage of borings taken was 560 lineal feet. The detailed boring logs are attached hereto.

All samples obtained from the borings were classified in the field. Selected samples were also subjected to laboratory analyses to more accurately define the soil properties that affect a foundation design. These analyses consisted of 74 unconfined compression tests of which 7 was on remolded samples, 7 Atterberg limit determinations, and 2 (quick) undrained unconsolidated triaxial compression tests. The compression tests provide the soil property which determines the allowable bearing pressures underneath spread footings or the skin friction for piles. The Atterberg limit determinations provide an indication of the soils susceptibility to swell with changes in moisture content as well as a more accurate classification of the soil than obtainable from field methods. The results of these analyses are shown on tables 1 through 9.



BORING PLAN

1" = 200'

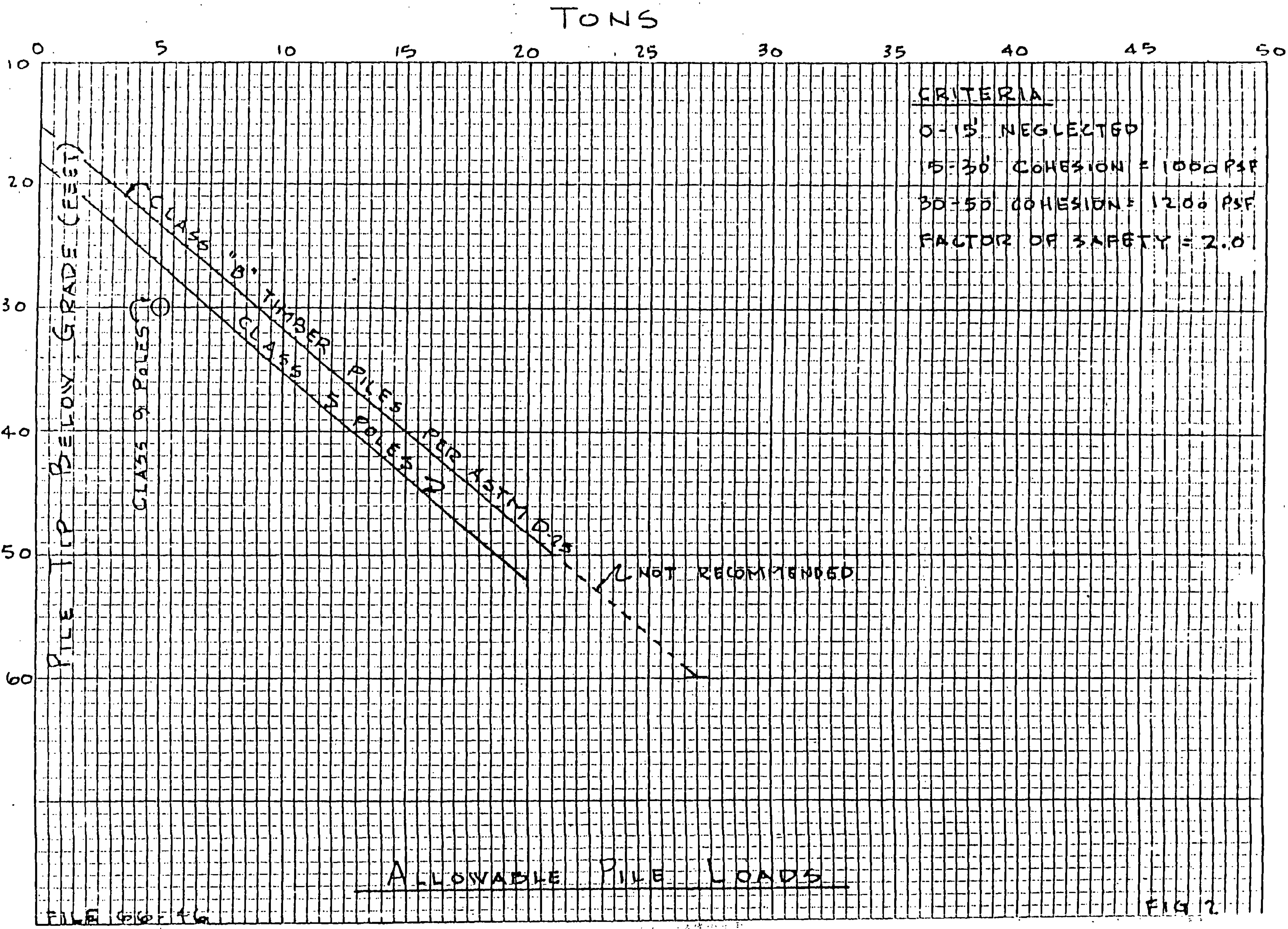


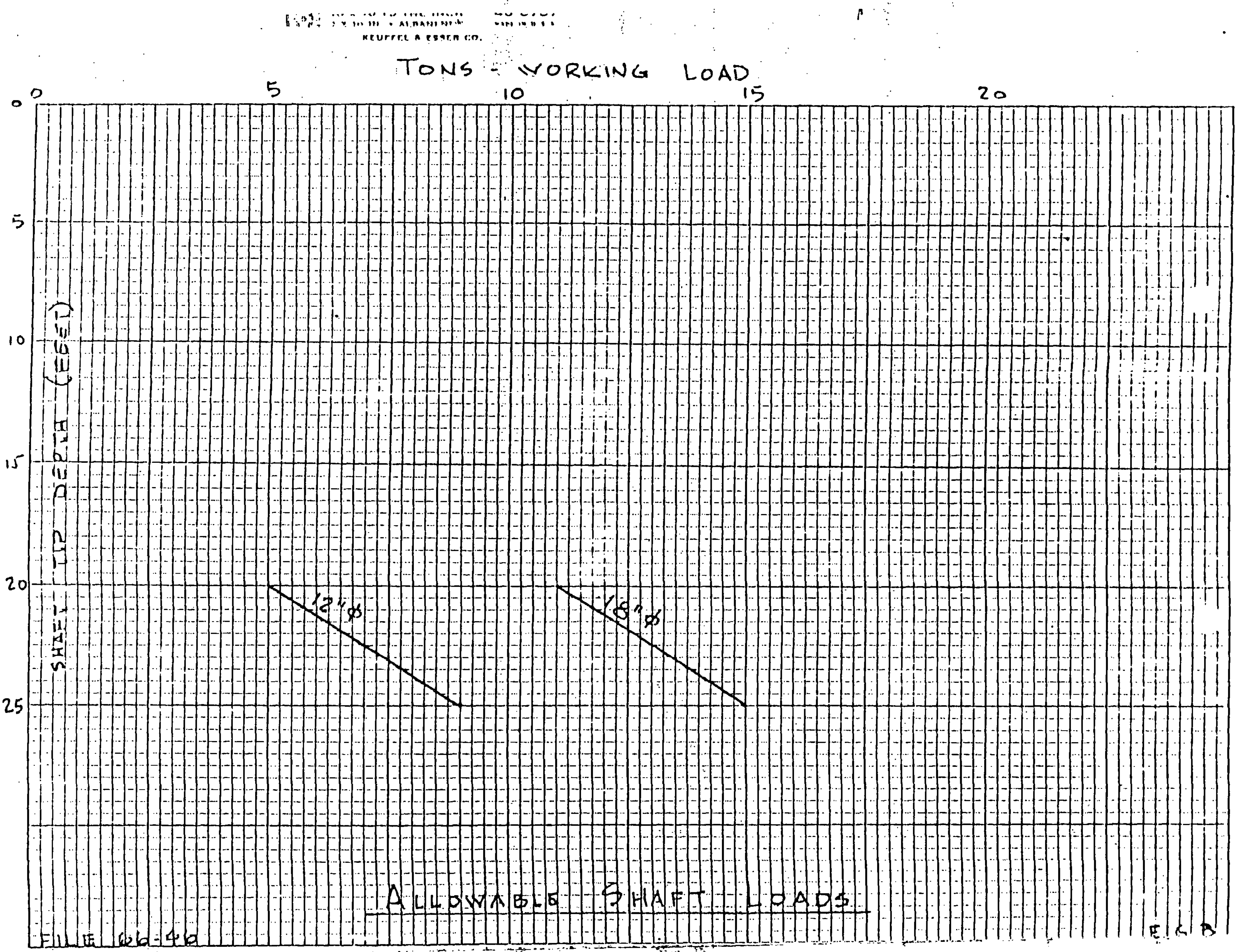
TYPICAL SOIL PROFILE

FILE 66-46

FIG 1

KEUFFEL & ESSER CO.




KEUFFEL & ESSER CO.
TONS - WORKING LOAD
0
5
10
15
20
0
5
10
15
20
25
SHAFT TIP DEPTH (FEET)
12"φ
18"φ
ALLOWABLE SHAFT LOADS
FILE 66-46
E.G.B.

RESULTS OF LABORATORY ANALYSES

TABLE 1

PROJECT: Valley Park School

NO: 66-46

BORING NO.	DEPTH	% MOIST.	DRY DENSITY PCF	ATTERBERG LIMITS LL	PL	PI	COMPRESSION TEST: COMPRESSION TSF	% STRAIN	CONFINING PRESSURE KSF: TOTAL	EFFECTIVE	TYPE FAILURE	CONSOLIDATION	GRAIN SIZE	OTHER	TYPE OF MATERIAL
1	0-2			27	21	6									Firm slightly clayey silt
	13-15	23	106				2.11	10			Yield				Very stiff clay
	18-20	23	104				0.95	7			Vertical shear				Medium silty clay
	23-25	26	101				2.26	10			Yield				Very stiff clay
	28-30	26	99				0.49	5			Silt streak				Loose clayey silt
	33-35	35	87				1.71	5			Slickensided				Stiff clay
	38-40	34	91				1.97	10			Yield				Stiff clay
	43-45	39	86				.57	1			Slickensided				Stiff clay
				Remolded			1.64	5			Multiple Shear				
	48-50	21	109				2.32	10			Yield				Very stiff slightly silty clay

RESULTS OF LABORATORY ANALYSES

TABLE 2

PROJECT: Valley Park School

NO: 66-46

BORING NO.	DEPTH	% MOIST.	DRY DENSITY PCF	ATTERBERG LIMITS LL	PL	PI	COMPRESSION TEST: COMPRESSION TSF	% STRAIN	CONFINING PRESSURE-KSF: TOTAL	EFFECTIVE	TYPE FAILURE	CONSOLIDATION	GRAIN SIZE	OTHER	TYPE OF MATERIAL
2	0-2			41	23	18									Medium silty clay
	13-15	26	101				0.87	10			Yield				Medium slightly silty clay
	18-20	20	111				2.47	10			Yield				Very stiff clay
	23-25	25	101				0.71	9			Jointed shear				Medium clay
	28-30	26	98				0.92	10			Yield				Medium silty clay
	33-35	26	98				1.09	6			Jointed shear				Stiff silty clay
	38-40	29	96				1.07	10			Yield				Stiff clay
	43-45	36	87				1.45	3			Slickensided				Stiff clay
				Remolded			1.69	7			Multiple shear				
	48-50	24	102				1.68	10			Yield				Stiff clay

RESULTS OF LABORATORY ANALYSES
TABLE 3

PROJECT: Valley Park School

NO: 66-46

BORING NO.	DEPTH	% MOIST.	DRY DENSITY PCF	ATTERBERG LIMITS LL	PL	PI	COMPRESSION TEST: COMPRESSION TSF	% STRAIN	CONFINING PRESSURE-KSF TOTAL	EFFECTIVE	TYPE FAILURE	CONSOLIDATION	GRAIN SIZE	OTHER	TYPE OF MATERIAL
3	0-2			57	22	34									Stiff clay
	13-15	25	100				1.10	10			Yield				Stiff clay
	18-20	24	104				2.39	10			Yield				Very stiff clay
	23-25	28	99				1.77	10			Yield				Stiff clay
	28-30														Firm clayey silt
	33-35	32	90				1.92	8			Yield				Stiff clay
	38-40	40	85				1.44	5			Slickensided				Stiff clay
				Remolded			1.97	7			Multiple shear				
	43-45	24	104				2.77	10			Yield				Very stiff clay
	48-50	26	102				2.87	10			Yield				Very stiff clay

RESULTS OF LABORATORY ANALYSES

TABLE 1

PROJECT: Valley Park School

NO: 66-46

BORING NO.	DEPTH	% MOIST.	DRY DENSITY PCF	ATTERBERG LIMITS LL	PL	PI	COMPRESSION TEST: COMPRESSION TSF	% STRAIN	CONFINING PRESSURE-KSF: TOTAL	EFFECTIVE	TYPE FAILURE	CONSOLIDATION	GRAIN SIZE	OTHER	TYPE OF MATERIAL
4	13-15	22	105				1.03	10			Yield				Stiff clay
	18-20	22	104				1.85	10			Yield				Stiff clay
	23-25	25	100				0.96	8			Vertical shear				Medium silty clay
	28-30	31	93				1.86	5			Slickensided				Very stiff clay
	33-35	31	94				1.73	7			Multiple shear				Stiff clay
	38-40	30	93				0.93	5			Slickensided				Stiff clay
				Remolded			1.28	8			Multiple shear				
	43-45	31	94				2.16	10			Yield				Very stiff clay
	48-50	39	83				1.58	5			Slickensided				Very stiff clay

RESULTS OF LABORATORY ANALYSES
TABLE 5

PROJECT: Valley Park School
NO. 66-46

BORING NO.	DEPTH	% MOIST.	DRY DENSITY PCF	ATTERBERG LIMITS			COMPRESSION TEST					CONSOLIDATION	GRAIN SIZE	OTHER	TYPE OF MATERIAL
				LL	PL	PI	COMPRESSION TSF	% STRAIN	CONFINING PRESSURE-KSF TOTAL	CONFINING PRESSURE-KSF EFFECTIVE	TYPE FAILURE				
5	0-2			45	20	25									Medium slightly silty clay
	13-15	26	99				0.94	10			Yield				Medium silty clay
	18-20	26	104				2.01	10			Yield				Very stiff clay
	23-25	26	99				1.73	10			Yield				Stiff slightly silty clay
	28-30	28	98				1.56	10			Yield				Stiff clay
	38-40	29	95				1.25	10			Yield				Stiff clay
	43-45	45	79				1.13	2			Slickensided				Stiff clay
				Remolded			1.58	7			Multiple shear				
	48-50	25	104				3.67	6			Multiple shear				Very stiff clay

RESULTS OF LABORATORY ANALYSES
TABLE 6

PROJECT: Valley Park School

NO.: 66-46

BORING NO.	DEPTH	% MOIST.	DRY DENSITY PCF	ATTERBERG LIMITS LL	PL	PI	COMPRESSION TEST: COMPRESSION TSF	% STRAIN	CONFINING PRESSURE ~~KK~~ psi TOTAL	EFFECTIVE	TYPE FAILURE	CONSOLIDATION	GRAIN SIZE	OTHER	TYPE OF MATERIAL
6	0-2			36	18	18									Stiff silty clay
	13-15	22	105				1.30	10			Yield				Stiff clay
	18-20	22	103				2.06	10			Yield				Very stiff clay
	23-25	26	99				.42	10			Yield				Soft very silty clay
	28-30	28	105												Very loose clayey silt
	33-35	27	100				.76	10		31	Yield			Quick	Loose slightly sandy silt
	38-40	28	92				.74	10		35	Yield			Quick	Loose slightly sandy silt
	43-45	38	85				1.18	10			Yield				Stiff clay
	48-50	24	104				3.17	8			45^{o} shear				Very stiff clay

RESULTS OF LABORATORY ANALYSES
TABLE 7

PROJECT: Valley Park School

NO: 66-46

BORING NO.	DEPTH	% MOIST.	DRY DENSITY PCF	ATTERBERG LIMITS LL	PL	PI	COMPRESSION TEST: COMPRESSION TSF	% STRAIN	CONFINING PRESSURE-KSF TOTAL	EFFECTIVE	TYPE FAILURE	CONSOLIDATION	GRAIN SIZE	OTHER	TYPE OF MATERIAL
7	0-2			32	22	10									Medium very silty clay
	13-15	24	98				0.98	10			Yield				Medium clay
	18-20	20	109				1.87	10			Yield				Stiff clay
	23-25	23	106				2.29	10			Yield				Very stiff clay
	28-30	23	103				1.87	10			Yield				Stiff clay
	33-35	26	99				1.81	10			Yield				Stiff clay
	38-40	30	94				1.20	5			Multiple shear				Stiff clay
	43-45	24	101				2.09	10			Yield				Very stiff clay
	48-50	36	85				1.66	4			Multiple shear				Stiff clay

RESULTS OF LABORATORY ANALYSES
TABLE 8

PROJECT: Valley Park School

NO: 66-46

BORING NO.	DEPTH	% MOIST.	DRY DENSITY PCF	ATTERBERG LIMITS			COMPRESSION TEST					CONSOLIDATION	GRAIN SIZE	OTHER	TYPE OF MATERIAL
				LL	PL	PI	COMPRESSION TSF	% STRAIN	CONFINING PRESSURE, KSF: TOTAL	CONFINING PRESSURE, KSF: EFFECTIVE	TYPE FAILURE				
8	13-15	24	103				1.41	10			Yield				Stiff clay
	18-20	21	107				2.61	10			Yield				Very stiff clay
	23-25	24	100				1.05	10			Yield				Stiff silty clay
	28-30	32	81				1.02	7			Multiple shear				Stiff clay
	33-35	34	88				.98	10			Yield				Medium slightly silty clay
	38-40	34	89				1.60	10			Yield				Stiff clay
	43-45	43	80				0.69	2			Slickensided				Stiff clay
				Remolded			1.23	9			Multiple Shear				
	48-50	22	107				2.27	8			45^{0} shear				Very stiff clay

RESULTS OF LABORATORY ANALYSES

TABLE 9

PROJECT: Valley Park School

NO. 66-46

BORING NO.	DEPTH	% MOIST.	DRY DENSITY PCF	ATTERBERG LIMITS LL	PL	PI	COMPRESSION TEST: COMPRESSION TSF	% STRAIN	CONFINING PRESSURE-KSF: TOTAL	EFFECTIVE	TYPE FAILURE	CONSOLIDATION	GRAIN SIZE	OTHER	TYPE OF MATERIAL
9	0-2			47	21	25									Stiff slightly silty clay
	13-15	23	104				2.00	10			Yield				Very stiff clay
	18-20	22	102				2.66	8			60° shear				Very stiff clay
	23-25	29	96				2.35	6			Multiple shear				Very stiff clay
	28-30	26	103				1.19	5			70° shear				Stiff slightly silty clay
	33-35	31	93				1.30	10			Yield				Stiff clay
	38-40	36	89				1.34	5			Slickensided				Stiff clay
				Remolded			1.65	10			Yield				
	43-45	23	106				2.68	8			Multiple shear				Very stiff clay
	48-50	24	104				2.72	4			Multiple shear				Very stiff clay

LOG OF BORING

PROJECT: Valley Park School
East Baton Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO. 1
FILE NO. 66-46
DATE 2 May, 1966

METHOD OF ADVANCE AUGER TO WASH Full Depth TO
FREE WATER ENCOUNTERED YES NO AT
WATER AT AFTER HRS.

DEPTH, FEET	SYMBOL	SAMPLES	
0			Firm slightly clayey silt
5			Garbage
10			Medium light gray and tan silty clay
			Very stiff light gray and tan clay
15			
			Medium light gray and tan silty clay with silt pockets
20			
			Very stiff light gray and tan clay
25			
			Loose tan clayey silt
30			
			Stiff light gray and tan clay
35			
			Do.
40			
			Do.
45			
			Very stiff slightly silty clay
50			

LOG OF BORING

PROJECT: Valley Par.. School
East Baton Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO. 1
FILE NO. 66-46
DATE 2 May, 1966

METHOD OF ADVANCE AUGER TO WASH full depth TO
FREE WATER ENCOUNTERED YES NO AT
WATER AT AFTER HRS.

DEPTH, FEET	SYMBOL	SAMPLES	
50			
		■	Stiff light gray and tan clay with silt pockets
55			
		■	Do.
60			
			Bottom @ 60'

LOG OF BORING

PROJECT: Valley Park School
East Baton Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO. 2
FILE NO. 66-46
DATE 2 May, 1966

METHOD OF ADVANCE AUGER TO WASH Full Depth TO
FREE WATER ENCOUNTERED YES NO AT
WATER AT AFTER HRS.

DEPTH, FEET	SYMBOL	SAMPLES	
0			Medium brown silty clay
5			Garbage
			Medium gray silty clay
10			
			Medium light gray and tan slightly silty clay with silt pockets
15			
			Very stiff light gray and tan clay with silt pockets
20			
			Medium light gray and tan clay with silt pockets
25			
			Medium light gray and tan silty clay
30			
			Stiff light gray and tan silty clay
35			
			Stiff light gray and tan clay with silt pockets
40			
			Do.
45			
			Do. with silt pockets
50			

LOG OF BORING

PROJECT: Valley Park School
East Baton Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO. 2
FILE NO. 66-46
DATE 2 May, 1966

METHOD OF ADVANCE AUGER TO WASH full depth TO
FREE WATER ENCOUNTERED YES NO AT
WATER AT AFTER HRS.

DEPTH, FEET	SYMBOL	SAMPLES	
50			
		X	Stiff light gray and tan clay with silt pockets
55			
		X	Do.
60			
		X	Stiff light gray and tan slightly silty clay
65			
		X	Stiff light gray and tan with silt pockets
70			
		X	Do.
75			
		X	Do.
80			Bottom @ 80'

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Consulting E...

LOG OF BORING

PROJECT Valley Par[illegible] School
East Baton Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO. 3
FILE NO. 66-46
DATE 2 May, 1966

METHOD OF ADVANCE AUGER TO WASH full depth TO
FREE WATER ENCOUNTERED YES NO AT
WATER AT AFTER HRS.

DEPTH, FEET	SYMBOL	SAMPLER	
0			Stiff brown clay
5			
			Medium light gray and tan silty clay
10			
			Stiff tan clay
15			
			Very stiff light gray and tan clay with silt pockets
20			
			Stiff light gray and tan clay with silt pockets
25			
			Firm tan clayey silt
30			
			Stiff light gray and tan clay
35			
			Do.
40			
			Very stiff light gray and tan clay with silt pockets
45			
			Do.
50			

LOG OF BORING

PROJECT: Valley Park School
East Baton Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO. 3
FILE NO. 66-46
DATE 2 May, 1966

DEPTH, FEET	SYMBOL	SAMPLES	METHOD OF ADVANCE AUGER TO WASH full depth TO; FREE WATER ENCOUNTERED YES NO AT; WATER AT AFTER HRS.
50			
55			Stiff light gray and tan clay with silt opockets
60			Do.
			Bottom @ 60'

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LOG OF BORING

PROJECT: Valley Par School
East Baton Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO. 4
FILE NO. 66-46
DATE 28 April, 1966

DEPTH, FEET | SYMBOL | SAMPLES

METHOD OF ADVANCE AUGER TO WASH full depth TO
FREE WATER ENCOUNTERED YES NO AT
WATER AT AFTER HRS.

Clay fill

Garbage

Medium tan silty clay

Stiff light gray and tan clay

Do.

Medium light gray and tan silty clay

Very stiff light gray and tan clay

Stiff light gray and tan clay

Do.

Very stiff light gray and tan clay

Do. with silt pockets

LOG OF BORING

PROJECT: Valley Pa.. School
East Baton Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO. 4
FILE NO. 66-46
DATE 29 April, 1966

DEPTH, FEET	SYMBOL	SAMPLER	METHOD OF ADVANCE AUGER TO WASH full depth TO FREE WATER ENCOUNTERED YES NO AT WATER AT AFTER HRS.
50			
55			Stiff light gray and tan clay
60			Stiff light gray and tan slightly silty clay
			Bottom @ 60'

LOG OF BORING

PROJECT: Valley Par.. School
East Baton Rouge Parish School Board

BORING NO. 5
FILE NO. 66-46
DATE 29 April, 1966

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

METHOD OF ADVANCE AUGER TO WASH full depth TO
FREE WATER ENCOUNTERED YES NO AT
WATER AT AFTER HRS.

DEPTH, FEET	SYMBOL	SAMPLES	
0			Medium to stiff tan slightly silty clay
5			Garbage
10			Medium light gray and tan clay with silt pockets
			Medium light gray and tan silty clay
15			
			Very stiff light gray and tan clay
20			
			Stiff light gray and tan slightly silty clay
25			
			Stiff light gray and tan clay with silt pockets
30			
			Medium light gray and tan clay with silt pockets
35			
			Stiff light gray and tan clay with silt pockets
40			
			Do.
45			
			Very stiff light gray and tan clay
50			

LOG OF BORING

PROJECT: Valley Park School
East Baton Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO. 5
FILE NO. 66-46
DATE 29 April, 1966

METHOD OF ADVANCE AUGER TO WASH full depth TO

FREE WATER ENCOUNTERED YES NO AT

WATER AT AFTER HRS.

DEPTH, FEET	SYMBOL	SAMPLES	
50			
55			Stiff light gray and tan clay with silt pockets
			Do.
60			Bottom @ 60'

LOG OF BORING

PROJECT: Valley P. . School
East Baton Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO. 6
FILE NO. 65-46
DATE 29 April, 1965

METHOD OF ADVANCE AUGER TO WASH full depth TO

FREE WATER ENCOUNTERED YES NO AT

WATER AT AFTER HRS.

DEPTH, FEET	SYMBOL	SAMPLER	
0			Stiff dark gray silty clay
5			Garbage
10			Medium gray and tan clay
			Stiff light gray and tan clay with silt streaks
15			
			Very stiff light gray and tan clay with silt streaks
20			
			Soft light gray and tan very silty clay
25			
			Very loose light gray and tan clayey silt
30			
			Loose light gray and tan slightly sandy silt
35			
			Medium tan silty clay
40			
			Stiff light gray and tan clay
50			
			Very stiff light gray and tan clay
50			

LOG OF BORING

PROJECT: Valley Park School
East Baton Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO. 6
FILE NO. 66-46
DATE 29 April, 1966

DEPTH, FEET	SYMBOL	SAMPLER	METHOD OF ADVANCE AUGER TO WASH full depth TO FREE WATER ENCOUNTERED YES NO AT WATER AT AFTER HRS.
50			
55			Stiff gray silty clay
60			Stiff light gray and tan clay
			Bottom @ 60'

LOG OF BORING

PROJECT: Valley Park School
East Baton Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO 7
FILE NO. 66-56
DATE 28 April, 1966

METHOD OF ADVANCE AUGER TO WASH full depth TO

FREE WATER ENCOUNTERED YES NO AT

WATER AT AFTER HRS.

DEPTH, FEET	SYMBOL	SAMPLES	
0			Medium dark gray and tan very silty clay
5			Garbage
10			Medium gray clay with silt streaks
15			Medium light gray and tan clay with silt pockets
20			Stiff light gray and tan clay with silt pockets
25			Very stiff light gray and tan clay
30			Stiff light gray and tan clay with silt streaks
35			Do.
40			Do.
45			Very stiff light gray and tan clay with silt pockets
50			Do.

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LOG OF BORING

PROJECT: Valley Park School
East Baton Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO. 7
FILE NO. 66-46
DATE 28 April, 1966

METHOD OF ADVANCE AUGER TO WASH full depth TO
FREE WATER ENCOUNTERED YES NO AT
WATER AT AFTER HRS.

DEPTH, FEET	SYMBOL	SAMPLER	
50			
55			Stiff light gray and tan clay with silt pockets
			Do.
60			
			Bottom @ 60'

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LOG OF BORING

PROJECT: Valley Pa. School
East Baton Rouge Parish School Board

BORING NO. 8

FILE NO. 66-46

DATE 2 May, 1966

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

METHOD OF ADVANCE AUGER TO WASH full depth TO

FREE WATER ENCOUNTERED — YES NO AT

WATER AT AFTER HRS.

DEPTH, FEET	SYMBOL	SAMPLES	
0			Clay and shell fill
			Garbage
5			
10			Medium tan slightly silty clay
15			Stiff light gray and tan clay with silt pockets
20			Very stiff light gray and tan clay
25			Stiff silty clay
30			Stiff light gray and tan clay
35			Medium light gray and tan slightly silty clay with silt streaks
40			Stiff light gray and tan clay
45			Do.
50			Very stiff light gray and tan clay

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LOG OF BORING

PROJECT: Valley Park School
East Baton Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO. 8
FILE NO. 66-46
DATE 2 May, 1966

METHOD OF ADVANCE AUGER TO WASH full depth TO
FREE WATER ENCOUNTERED YES NO AT
WATER AT AFTER HRS.

DEPTH, FEET	SYMBOL	SAMPLES	
50			
55			Stiff light gray and tan clay with silt pockets
60			Do.
			Bottom @ 60'

LOG OF BORING

PROJECT: Valley P? ' School
East Bat. Rouge Parish School Board

FOR: Desmond-Miremont & Associates, Inc.
Architects and Engineers

BORING NO. 9
FILE NO. 66-46
DATE 29 April, 1966

METHOD OF ADVANCE AUGER TO WASH full depth TO
FREE WATER ENCOUNTERED YES NO AT
WATER AT AFTER HRS.

DEPTH, FEET	SYMBOL	SAMPLER	
0			Medium dark gray and tan slightly silty clay
5			Garbage
10			Medium tan silty clay
15			Very stiff light gray and tan clay with silt pockets
20			Do.
25			Do.
30			Stiff light gray and tan slightly silty clay
35			Stiff light gray and tan clay
40			Do.
45			Very stiff light gray and tan clay
50			Do.

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Consulting Engineers

REFERENCE NO.

5

PRELIMINARY ASSESSMENT

DATE: August 31,1989

PREPARED BY: Charles Hunter, Inactive and Abandoned Sites, LaDEQ, Baton Rouge, LA

Site: Valley Park Middle School
4510 Bawell St.
Baton Rouge, LA 70808

EPA ID#: None assigned.

TDD#: None assigned.

1. Site Information

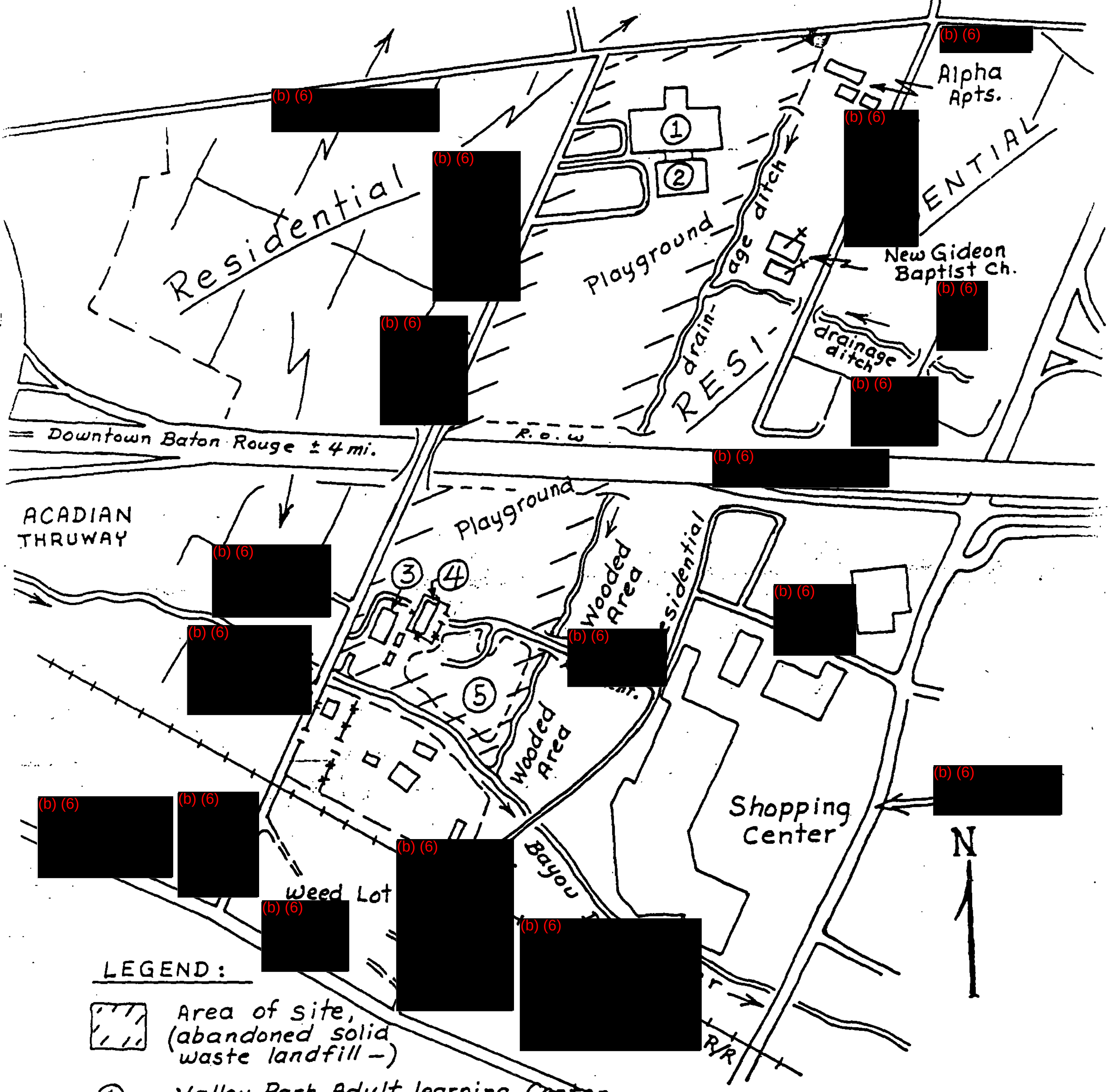
The Valley Park Middle School site, hereinafter referred to as "the site", occupies approximately 36 acres in Baton Rouge, Louisiana. The site is a rectangular shaped property bounded by Bawell St. to the North, Nairn St. to the West, Dawson Creek to the South, and an unnamed drainage ditch to the East (see figure 1). The geographic coordinates are 30° 26' 33" N latitude and 91° 08' 38" W longitude. The site overlies a former municipal landfill for the City of Baton Rouge, and is divided East to West by Federal Highway Interstate 10 (I-10). The Valley Park Middle School building is located on the site property north of I-10 that totals just over 23 acres, and the Valley Park Recreational Playground is located on the site property south of I-10 that totals approximately 13 acres. The East Baton Rouge School Board acquired the site property north of I-10 from the City of Baton Rouge in 1965. The East Baton Rouge Parish Recreation and Park Commission (BREC) and the Baton Rouge City-Parish separately own all the parcels of the site south of I-10 (1). Because there are buildings and play areas located over the landfill and because there are no records of what was disposed at the landfill during its operation, the purpose of this investigation is to compile records and evidence of the impact of landfill contaminants.

2. Background/Operating History

a. Site history.

FIGURE 1:

LOCATION PLAT



LEGEND:

Area of site, (abandoned solid waste landfill –)

1. Valley Park Adult learning Center
2. Valley Park Middle School
3. [redacted] Park (A BREC facility)
4. Dept. of Public Works, S. Maint. Lot
5. Dept. P.W., Stockpile excess dirt and broken concrete –

Note: Orig. Sz. of landfill = 40 ac. (Valley park area = 23 ac; [redacted] Pk. = 13 ac.; I-10 area = 4 ac. –)

LOCATION PLAT

Valley Park Elementary Site
(City of Baton Rouge, La., E. Baton Rouge Ph.)
Data taken from an Aerial
Photo (La. DOTD 450-10-00,
749-29, taken 5-20-86) –
EBO/4-1-89 Scale: 1" = 505'

The Baton Rouge City-Parish began using the site, then called the Valley Park Landfill, as a backup to their primary landfill, the McKinley St. Landfill, in the 1940's, and continued to use it as a backup landfill until the McKinley St. Landfill was closed in 1957. The site served as the City-Parish's primary landfill from 1958 through 1962. Investigation of City-Parish records revealed no existing documentation of the types or quantities of materials disposed at the site during this period. Landfilling at the site was discontinued with the commencement of construction of the interstate at the site in 1963. The construction of I-10 across the property was completed in 1965. In August, 1965, the East Baton Rouge School Board acquired the site property north of I-10 in a land swap with the City-Parish (2). Construction of the Valley Park School building began in 1966. The building is situated directly over a portion of the landfill (3). The school system operated the building as a junior high school (approx. 800 children, grades 9 &10) from 1968 through the 1978-79 school year, and as a middle school (approx. 600 children, grades 6,7 &8) from the 1979-80 school year through the 1985-86 school year (4). Since September,1986, the EBR School System has housed special education support services personnel and an adult education program in the building. At the present time, approximately 150 staff and from 20 to 50 students occupy the building 40 hours per week and an estimated 150 adult education students occupy the building 15 hours per week (4,5). BREC built a recreational park, called Nairn Park, on the landfill south of I-10 in 1966, right after the EBR School Board began development of the site property north of I-10. Since then additional fill material has been added to the playing field on an as needed basis to maintain a solid flat playing surface. The Director of Nairn Park estimates that approximately 300 people use the playing field each week throughout the year for recreational purposes.

b.Discussion of known/potential problems

-Summary of existing analytical data

The Hazardous Waste Management Division, La. Department of Natural Resources (LaDNR), contracted for laboratory testing of one water and three sludge samples from the site in December, 1981. Tests for 14 heavy metals in the water sample, and 88 organic compounds in the sludge samples indicated "no environmental problems at this time" (6,7). In August, 1982, three Louisiana State University (LSU) faculty/researchers released a report of analysis of soil-sediment and surface water samples performed by a class of LSU students during Spring, 1982. They reported that " (t)he soil-sediment samples contained elevated levels of zinc, cadmium, and lead", and that..."arsenic concentrations in the first two leachate streams (plumes into the drainage ditch along the eastern boundary of the site) were a factor of 10 higher than the upstream soils" (8). In December, 1982, as a followup to the LSU study, the Hazardous Waste Management Division, LaDNR, contracted for analysis of seven samples drawn from the site for the presence of 29 volatile and 57 semivolatile organic priority pollutants, 25 pesticides and polychlorinated biphenyls (PCBs), and 14 heavy metal priority pollutants (9,10). This analysis, summarized in Table 1, revealed the presence of two volatile organic priority pollutants, chloroform and methylene chloride, in two soil samples drawn from the school and recreational playgrounds; a combined total of 15 semivolatile organic priority pollutants and 11 heavy metal priority pollutants present in varying numbers and amounts in all seven samples; and no pesticides or PCBs in any of the samples. Analysis of these 1982 reports reflects there is the potential for direct contact with priority pollutants at the site, and therefore a strong possibility for concern at the present time.

-Summary of off-site reconnaissance

Aerial photos of the site include pictures taken in 1941, 1953, 1959, 1965, 1981 and 1986 (8,11).

-Sources of available information

Sources would include past employees of the City-Parish landfill system, BREC, and the SPCA.

-Emergency or remedial actions

In November, 1988, the Inactive and Abandoned Sites (IAS) Division, LaDEQ, responded to a citizen's complaint filed by an East Baton Rouge Parish School System employee housed in the Valley Park Middle School building at the site. The employee was situated in the pupil appraisal room that was previously the cafeteria when the building served as a school. She complained of a foul smell, "like rotten garbage, rotten eggs" eminating from the floor drains in the room. In March, 1989, the IAS Division investigated the school building for the presence of volatile organics, using an Organic Vapor Analyzer (OVA). No volatile organics were detected. However, the OVA unit used was not capable of detecting either hydrogen sulfide (H_2S) or methane gases, two gases known to be generated in landfills; one, H_2S, with the characteristic odor of rotten eggs. The school system plugged the floor drains the following week and no further complaints have been received by the IAS Division (4,5).

3. Waste containment/Hazardous Substance Identification

a. Documentation available

Investigation by the IAS Division supports that the Baton Rouge City-Parish maintained no records of types or quantities of waste materials received by its landfills during the 40's, 50's, or 60's. Hence, no waste disposal records or manifests are believed to exist.

b. Potential/known waste type/estimated waste quantity/operation responsible

Known waste types identified in site soil and leachate samples include two volitile organic and 15 semivolitile organic priority pollutants, and 11 heavy metal priority pollutants (12,13). Assuming that the site includes 36 acres of fill material, and assuming a uniform soil profile of 6 to 8 feet of garbage mixed with fill soil, there are approximately 400 thousand cubic yards of garbage/fill mix at the site. Of this estimated total of gardage/fill mix, approximately 256 thousand cubic yards underly the Valley Park Middle School building and school grounds and 144 thousand cubic yards underly Nairn Park. The Baton Rouge City-Parish is the party responsible for the operation of Valley Park Landfill and, consequently, all materials disposed at the site.

c. Containment

There are no containment structures other than the two foot clay fill overlying the landfill.

4. Pathway Characteristics

a. Air pathway characteristics (gas mobility)

Landfill-produced H_2S and methane gases are [redacted] pathway contaminants of concern. No vapor sampling has been performed on site for the presence of H_2S or methane, though there is reason to suspect their presence based upon the citizen's complaint(4,5).

b. Ground water characteristics

-Regional ground water setting

A typical soil profile for the Baton Rouge area includes a hard clay pleistocene layer which blankets the area beginning at a depth of approximately 15 feet and extending to a depth of a minimum of 60 feet below sea level. East Baton Rouge Parish overlies 12 fresh water aquifers aligned in layers of sand from 200 to 3100 feet below sea level. Except for the alluvial sand aquifer layers near the surface that lie near the Mississippi River and west of the River, these aquifers are recharged where they reach the earth's surface east of the Mississippi River and northward as far as into the state of Mississippi. The blanket layer of hard pleistocene clay serves as a natural barrier restricting migration of contaminants into the aquifers from above (14).

-Site specific conditions

There are 90 registered water wells within a four mile radius of the site that are either operational or on standby, 41 of which are public supply wells (see attached water well location map (15) and well listing (16)). Of the 17 wells within a two mile radius of the site, five are public supply wells. Other wells may exist in this area that have not been registered with the Louisiana Department of Transportation (LaDOTD) Office of Public Works.

-Net precipitation estimate

Based upon thirty years of data (1951-1980) from the National Weather Service, mean annual rainfall is 55.8 inches in the Baton Rouge area. Water budget analysis performed by the Louisiana Office of State Climatology indicates that the average environmental moisture utilization (evapotransporation) for the same 30 years is approximately 36.3 inches. The difference between these two values, surplus available for runoff, equals 19.5 inches per year (17). During June, 1989, a total of 23 inches of rainfall was recorded in the Baton Rouge area, and it rained on 15 of the first 17 days in July, 1989.

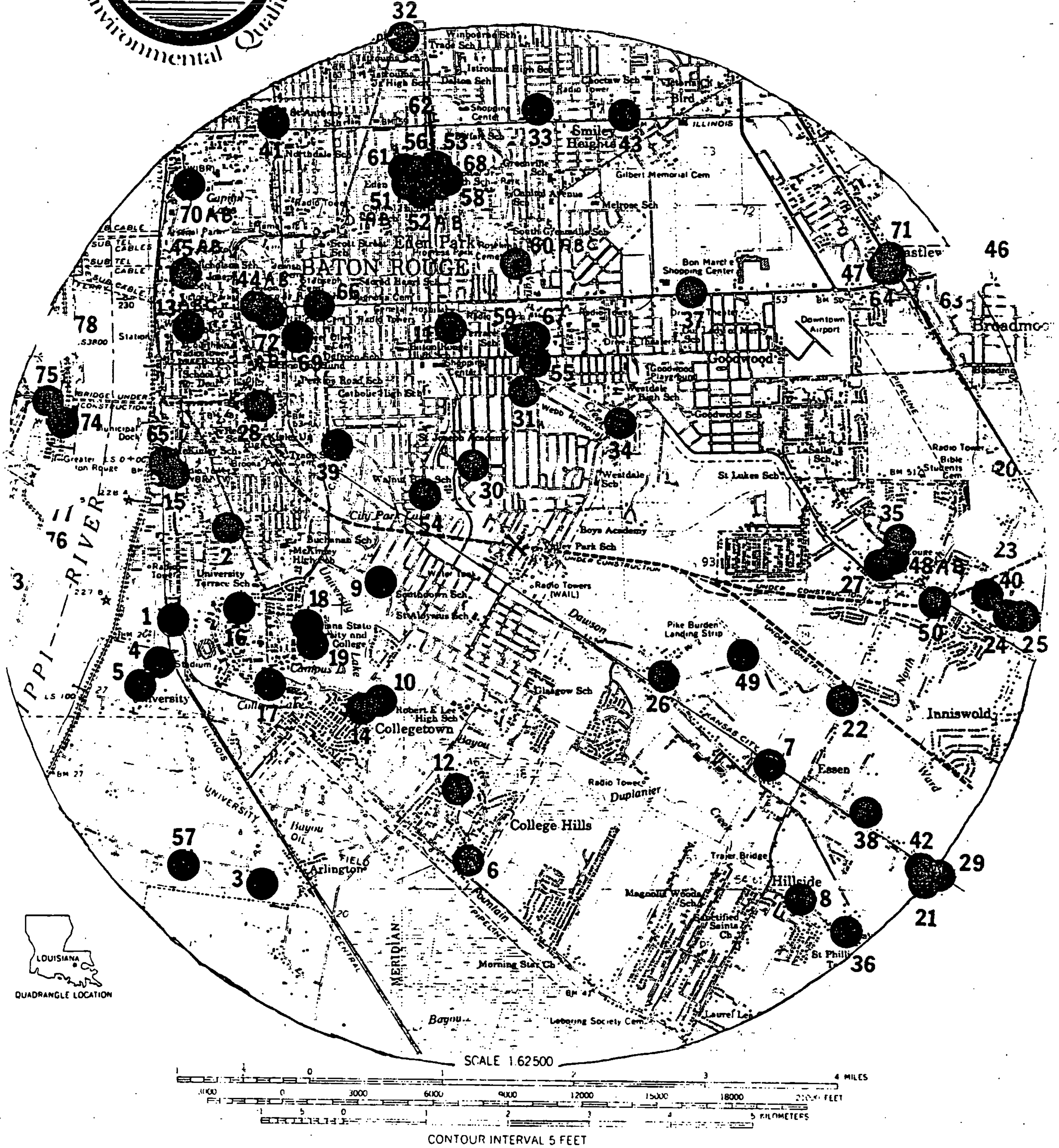
c. Surface water characteristics

-Regional surface water setting

An open drainage ditch bounds the site to the North and East and carries surface water from the site southwestward, joining Dawson's Creek which bounds the site to the South. Dawson's Creek then flows southeastward joining Ward's Creek 6.3 miles downstream from the site. Approximately 7.5 miles downstream from the site, Ward's Creek divides forming a 1.5 mile long diversion canal which then rejoins Ward's Creek. At a point 12.3 miles downstream from the site, Ward's Creek joins Bayou Manchac which

Louisiana Department of Environmental Quality

VALLEY PARK MIDDLE SCHOOL SITE
WATER WELL LOCATIONS



SCALE 1:62500

CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

flows easterly. The 15 mile target distance is reached 2.7 miles downstream along Bayou Manchac where the Bayou intersects Welsh Gully. Bayou Manchac joins the Amite River which flows southeasterly into Lake Maurepas which connects with Lake Pontchartrain and eventually the Gulf of Mexico.

-Recreational use

Bayou Manchac is used heavily for recreational purposes. Its banks are lined with camps, some occupied year-round and some occupied seasonally for fishing and/or hunting. A small wetlands area exists along Ward's Creek within the target distance downstream from the site. A diversion canal has been constructed along this section of Ward's Creek to assist stream flow during high water conditions. Bayou Manchac drains a watershed, Alligator Swamp, that is used for marshland hunting and fishing.

5. Targets

There are 90 known ground water wells within 4 miles of the site, 41 of which are used for public water supplies (15,16), and there are five public supply wells within two miles of the site. There are no drinking water intakes along the 15 mile surface water migration path from the site. Surface water along the 15 mile migration pathway is used for recreational fishing only. The population within 4 miles of the site is 121,994 (18). Single family residences abutt the site to the North, West, and East.

6. Other Regulatory Involvement

None

7. Conclusions and Recommendations

The Valley Park Middle School Site is a 36 acre former municipal landfill for the City-Parish of Baton Rouge. A total of 27 priority pollutants in the form of volitile organics (chloroform and methylene chloride), semivolitile organics (phthalates, pyrenes, fluoranthenes, and others), and heavy metals (arsenic, mercury, chromium, lead, and others) have been detected at locations on site that are in direct contact with school students, personnel, and the general public. Sample analysis has revealed the presence of no pesticides or PCBs on site. The major concern is the proximity of the school building and the recreation center/playground to the covered landfill. An estimated 300 people use the BREC ball diamond each week and another 300+ personnel/students use the school building as a job site or attend classes on a regular basis. Another concern is the potential for contamination of surface water from migration of pollutants from the landfill. Site surface water drainage is not controlled. Analysis of sludge samples drawn from the open drainage ditch in 1982 suggested that surface water migration of priority pollutants had not advanced to Dawson's Creek. The present surface water migration status of priority pollutants is unknown.

The IAS Division, LaDEQ, concludes that further information is necessary to characterize the site.

REFERENCES

Reference Number	Reference
1	Plat of Nairn Drive Park, Site Property South of I-10. January 28, 1980.
2	Legal Document, Title Transfer of Property Between BR City-Parish and the EBR School Board. August 23, 1965.
3	Letter from Louis Capizzoli Jr., CEC, to EBR School Board Regarding Building Construction Recommendations. May 12, 1966.
4	LaDEQ, IAS Division, Citizen's Complaint Record. November, 1988.
5	Memorandum from Tom Mayhall, LaDEQ, to File Regarding Valley Park Middle School. March 30, 1989.
6	LaDNR, Interim Inspection Report Providing Results of Lab Tests Performed by Enviro-Med. December 9 1982.
7	Enviro-Med Laboratories, Report of Findings from Analysis of 3 Samples Drawn from the Site. November 30, 1981.
8	Hill, John M., Malone, Roland F., Burden, David S., "A Preliminary Environmental Assessment, East Valley Park Middleschool Landfill Site", Submitted to LaDNR. October, 1982.
9	Hazardous Waste Management Division, LaDEQ, General Inspection Report Listing Field Sample Locations/Statistics. December 1, 1982.
10	Gulf South Research Institute (GSRI), "Preliminary Data Summary- Priority

REFERENCES

Reference Number	Reference
10,cont'd.	Pollutant and Miscellaneous Analytical Determinations", Prepared for Hazardous Waste Management Division, LaDNR. December 13, 1982.
11	Aerial Photo of the Valley Park Middle School Site. May 20, 1986.
12	(GSRI), "Final Data Summary- Priority Pollutant and Miscellaneous Analytical Determinations", Prepared for Hazardous Waste Management Division, LaDNR. December 21, 1982.
13	LaDEQ, IAS Division, Summary Table of GSRI Sample Analysis Results Contained in December 21, 1982 Final Report. August 4,1989.
14	La Dept. of Conservation, La. Geol. Survey, and La. Dept. of Public Works, Water Resources Bulletin #2, "Ground Water Conditions in the Baton Rouge Area 1954-59". December, 1961.
15	LaDEQ, IAS Division, Valley Park Middle School Site Water Well Location Map, July 25, 1989.
16	DOTD Water Resources Division, Listing of Water Wells Within 4 Mile Coordinates of Valley Park Site. July 18,1989.
17	Letter from LSU Assistant Climatologist to Charles Hunter, LaDEQ, Regarding Baton Rouge Precipitation. June 26, 1989.
18	POPULATION ESTIMATE WITHIN 4 MILES RADIUS OF SITE BASED UPON ESTIMATED 1988 CENSUS TRACT POPULATIONS, AUGUST 31, 1989.

REFERENCE NO.

6

File ____________

Inspection Date 12/09/81

DEPARTMENT OF NATURAL RESOURCES

HAZARDOUS WASTE REGULATION
INTERIM INSPECTION REPORT

Investigating Team:

____
____
____

Persons Interviewed:

____
____
____

COMPANY Central Valley Park School
(Name and Address)

MANAGER ____________ Person to Contact ____________ Phone ____________

Operation Location (town, highway, ect.) ____________ Parish ____________

Type of Operation ____________

Probable Classification: Generator ______ Transporter ______ Disposer ______

Size of Operation: Total Acreage ______ Operational Acreage ______

REASON FOR INSPECTION		Explanation
Complaint		
Permitting		
Compliance		
Other	x	request to test for possible hazardous waste.

POSSIBLE WASTE TYPES ASSOCIATED WITH SITE OR INDUSTRIAL OPERATION

	Explanation
Category I	
Category II	
Category III	
Non-hazardous*	

GENERAL SITE OR OPERATIONAL ASSESSMENT

Be specific—when inspection indicates that waste generators, transporters, or disposers will be regulated by the Hazardous Waste Management Plan, refer to site or operational infractions by numerical paragraph designation and brief explanation. Use addendum sheet if necessary.

Regulation Paragraph No. — Explanation

Laboratory test from Enviro-Med. Laboratories, Inc. indicate no environmental problems at this time.

A copy of the laboratory data is attached to this report.

*Refer to appropriate Agency if applicable ______________________
(State Agency)

Report by: GLENN A. MILLER

Reviewed by: ____________

See Addendum ______ Yes
______ No

Inspection-DNR-HW-Enforcement 2/80

LOG OF SOIL BORING

PROJECT: PRELIMINARY SOIL INVESTIGATIONS JOB NO.: 085

LOCATION (PARISH): CENTRAL VALLEY PARK SCHOOL, BATON ROUGE, (EBR) BORING NO.: B-1 DATE: 11/30/81

DRILLING CONTRACTOR: /ENGR.: N.M. DAVE

DRY AUGER DRILL RIG Hand Auger

WASH BORING

GROUND WATER LEVELS	DEPTH (feet)	SAMPLING	SPT (blows/foot) or P (TSF)	COMPRESSIVE STRENGTH (TSF)	M C (%)	D D (PCF)	L L (%)	P I (%)		DESCRIPTION OF STRATA
			GL-½'							Soft to medium gray very silty clay with silt lenses (fill) ... with glass fragments & metal pieces
	2.5		2½'-3'							Gray and tan clayey silt with small glass fragments (fill)
	5.0		4'-4½'							Soft gray and tan silty clay with sand layers.
			6'-6¼'							Soft blue gray sandy clay
	7.5		8'-8¼'							Gray clayey silt with sand layers
	10									Boring terminated @ 8¼'

KEY

SHELBY TUBE
STANDARD PENETRATION TEST
GROUND WATER FIRST ENCOUNTERED
STATIC GROUND WATER LEVEL (AFTER ______ HOURS)
Disturbed Soil Sample

P POCKET PENETROMETER
M C MOISTURE CONTENT
D D DRY DENSITY
L L LIQUID LIMIT
P I PLASTICITY INDEX

REMARKS

Soil moist at 7 3/4 feet.
Boring location by the ditch.

LA FORM 81-01

OFFICE OF ENVIRONMENTAL AFFAIRS
LOUISIANA DEPARTMENT OF NATURAL RESOURCES

SAMPLE # 14529

ANALYTICAL REPORT
PRIORITY ORGANIC COMPOUNDS

ENVIRO-MED LABORATORIES,
414 W. California, Rusto
1874 Dallas Dr., Baton Rou

Service to: DNR
Address: P.O. Box 44396
Baton Rouge 70804
Attention: Glen Miller
Title:
Sample I.D.:
Date Collected: By: Time:
Date Received: 11/30 By: LS Time:
Brought In: (Yes) (No) Type: Water Soil
Extracted By: LS Date: 12-8-81 Sludge Other

File No: Report No:
Invoice No: Date:
P.O. No: RPD:

Analyzed By		Date	Time	Column	Inj.
VOA	GC/MS	12/1		CW1500	1.41
B/N	GC/MS	12/9		SP2250	
A/P	GC/MS	12/11		SP1240	2u
P/PCB	-	-	-	ov17/ov 210	2u

Comments:

PURGEABLE COMPOUND	Conc. (ppm)	Detn. Lmt (ppm)	BASE/NEUTRAL COMPOUND	Conc. (ppm)	De
Acrolein	-	0.01	Dimethyl Phthalate	-	
Acrylonitrile	-	0.01	Diethyl Phthalate	-	
Benzene	-	0.01	Di-N-Octyl Phthalate	-	
Chlorobenzene	-	0.01	Di-N-Butyl Phthalate	-	
Ethylbenzene	-	0.01	bis(2-Ethylhexyl) Phthalate	6.65	
Methyl Bromide	-	0.01	Butyl Benzyl Phthalate	-	
Bromoform	-	0.01	bis(2-Chloroethyl) Ether	-	
Methylene Chloride	0.022	0.01	bis(2-Chloroisopropyl) Ether	-	
Methyl Chloride	-	0.01	bis(2-Chloroethoxy) Methane	-	
Carbon Tetrachloride	-	0.01	4-Chlorophenyl Phenyl Ether	-	
Vinyl Chloride	-	0.01	4-Bromophenyl Phenyl Ether	-	
Chloroform	-	0.01	Hexachloroethane	-	
Chloroethane	-	0.01	1,4-Dichlorobenzene	-	
1,1-Dichloroethane	-	0.01	1,3-Dichlorobenzene	-	
1,2-Dichloroethane	-	0.01	1,2-Dichlorobenzene	-	
1,1,2,2-Tetrachloroethane	-	0.01	Hexachlorobutadiene	-	
1,1,1-Trichloroethane	-	0.01	Hexachlorocyclopentadiene	-	
1,1,2-Trichloroethane	-	0.01	2-Chloronapthalene	-	
bis-(Chloromethyl) Ether	N/A	0.01	Hexachlorobenzene	-	
2-Chloroethyl vinyl Ether	-	0.01	1,2,4-Trichlorobenzene	-	
1,1-Dichloroethylene	-	0.01	N-Nitrosodi-n-Propylamine	-	
trans-1,2-Dichloroethylene	-	0.01	N-Nitrosodimethylamine	-	
Tetrachloroethylene	-	0.01	N-Nitrosodiphenylamine	-	
Trichloroethylene	-	0.01	1,2-Diphenylhydrazine	-	
Chlorodibromomethane	-	0.01	Isophorone	-	
Dichlorodifluoromethane	-	0.01	Nitrobenzene	-	
Dichlorobromomethane	-	0.01	2,6-Dinitrotoluene	-	
Trichlorofluromethane	-	0.01	2,4-Dinitrotoluene	-	
1,2-Dichloropropane	-	0.01	Benzidine	-	
cis-1,3-Dichloropropene	-	0.01	3,3'-Dichlorobenzidine	-	
trans-1,3-Dichloropropene	-	0.01	Naphthalene	-	
Toluene	-	0.01	Acenaphthene	-	
PESTICIDE/PCB COMPOUND			Acenaphthylene	-	
			Fluorene	-	
Alpha-Endosulfan		0.01	Anthracene	0.149	
beta-Endosulfan		0.01	Phenanthrene		
Endosulfan Sulfate		0.01	Pyrene	0.158	
alpha-BHC		0.01	Chrysene	-	
beta-BHC		0.01	Benzo (a) Anthracene	-	
delta-BHC		0.01	Fluoranthene	0.178	
gamma-BHC		0.01	Benzo (b) fluoranthene	0.113	
Aldrin		0.01	Benzo (k) fluoranthene	0.256	
Dieldrin		0.01	Benzo (a) Pyrene	-	
4,4'-DDE		0.01	Indeno(1,2,3-c,d) Pyrene	-	
4,4'-DDD		0.01	Dibenzo(a,h)Anthracene	-	
4,4'-DDT		0.01	Benzo(g,h,i)Perylene	-	
Endrin		0.01	**ACID EXTRACTABLE COMPOUND**		
Enrin Aldehyde		0.01			
Heptachlor		0.01	2-Nitrophenol	-	
Heptachlor Epoxide		0.01	2-Chlorophenol	-	
Chlordane		0.01	Phenol	-	
Toxaphene		0.01	2,4-Dimethylphenol	-	
Aroclor 1016		0.01	2,4-Dichlorophenol	-	
Aroclor 1221		0.01	2,4,6-Trichlorophenol	-	
Aroclor 1232		0.01	p-Chloro-m-Cresol	-	
Aroclor 1242		0.01	Pentachlorophenol	-	
Aroclor 1248		0.01	4-Nitrophenol	-	
Aroclor 1254		0.01	2,4-Dinitrophenol	-	
Aroclor 1260		0.01	4,6-Dinitro-O-Cresol	-	
(TCDD) Dioxin		0.01	None detected indicated by (-)		

Vicki S. Sanyon
Analyst(s)

Donald Lee Perry Ph.D
Certified by, Laboratory Manager

ANALYTICAL REPORT
TRACE METALS

Enviro-Med Laboratories, Inc.

414 W. CALIFORNIA · RUSTON, LA. 71270 · [illegible]
[illegible] ACADIAN THRUWAY, BATON ROUGE, LA [illegible]
Environmental, Bio-Medical, and Chemical Specialists

Service to: DNR
Address: P. O. Box 44066
Baton Rouge, LA 70804
Attention: Attn: Mr. Jim Porter
Title: Assistant Secretary
Sample Type: Grab ☒ Comp ☐ Preserved: ☐ Yes ☐ No
Date Collected (1) 11-30 Time: 0915
Date Collected (2) ______ Time: ______
Date Received: 11-30 Time: 1400
Collected By: G. M. Brought In: EML ☐ Client ☒

File No. ______ Report No. ______
Invoice No. ______ Date ______
P.O. No. ______ RPD ______

MISCELLANEOUS CHARGES:

1. Total Miles ______ at ______ ¢/mile ______
2. Labor Time ______ at ______ /hr. ______
3. Shipping Charges (bus) . . . . ______

Logged In By: RG Comments:
Rec. in Ruston 12-02-81

SAMPLE NO. 1 — 14527 EML # and Source: Gulley Water #1

SAMPLE NO. 2 — EML # and Source:

PARAMETER	† Pg. Ref.	Conc.	lbs. per day	Date Begun	Time Begun	Date Completed	Time Completed	Analyst	✓	Conc.	lbs. per day	Date Begun	Time Begun	Date Completed	Time Completed
Aluminum	144														
Antimony	AA	0.01													
Arsenic	282	0.04													
Barium	144														
Beryllium	287	<0.001													
Cadmium	144	0.006													
Calcium	144														
Chromium	144	0.049													
Cobalt	148														
Copper	148	0.011													
Iron - Total	148	13.28													
- Diss.	148														
Lead	151	0.07													
Lithium	AA														
Magnesium	148														
Manganese	148														
Mercury	156	<0.002													
Molybdenum	144														
Nickel	148	<0.005													
Potassium	144														
Selenium	159	<0.01													
Silver	148	<0.002													
Sodium	144														
Strontium	144														
Thallium	144	<0.01													
Tin	144														
Vanadium	152														
Zinc	148	0.300													

Raymond D Germany
Chemist/Biologist

Dr. Robert W. Flournoy, President

Analyses conducted in accordance with the List of Approved Test Procedures, published in Federal Register, vol. 41, no. 232, Wednesday, December 1, 1976. Test procedures are either from the 14th Edition of Standard Methods for the Examination of Water and Wastewater†, Methods for Chemical Analysis of Water and Wastes, 1976 (EPA).

The duplicate analyses and spiked samples for 12-10 indicate all methodologies are in control.

* Indicates out of permit compliance (Regulatory agencies should be notified within 5 days of non-compliance conditions)

Retain records for three years.

Unless otherwise stated, all data is reported in units of mg/l or ppm.

4/7[illegible]

File [illegible]
Inspection Date 11/30/81

DEPARTMENT OF NATURAL RESOURCES

HAZARDOUS WASTE REGULATION
INTERIM INSPECTION REPORT

Investigating Team:
Narendra Dave, Senior Geologist

Persons Interviewed:

COMPANY Central Valley Park School
(Name and Address)

MANAGER ______ Person to Contact ______ Phone ______
Operation Location (town, highway, ect.) ______ Parish ______
Type of Operation ______
Probable Classification: Generator ______ Transporter ______ Disposer ______
Size of Operation: Total Acreage ______ Operational Acreage ______

REASON FOR INSPECTION		Explanation
Complaint		
Permitting		
Compliance		
Other	x	request to test for possible hazardous waste

POSSIBLE WASTE TYPES ASSOCIATED WITH SITE OR INDUSTRIAL OPERATION

Explanation

Category I ______
Category II ______
Category III ______
Non-hazardous* ______

GENERAL SITE OR OPERATIONAL ASSESSMENT

Be specific—when inspection indicates that waste generators, transporters, or disposers will be regulated by the Hazardous Waste Management Plan, refer to site or operational infractions by numerical paragraph designation and brief explanation. Use addendum sheet if necessary.

Regulation
Paragraph No.

Explanation

A soil boring study was conducted to examine underlying strata beneath the school. Water samples and a sludge sample was taken from the ditch. Photographs and a sample soil boring profile is attached with this report. Laboratory data will be included when analysis is complete.

*Refer to appropriate Agency if applicable ______
(State Agency)

Report by: GLENN A. MILLER GAM

Reviewed by: ______

See Addendum ______ Yes
______ No

Inspection-DNR-HW-Enforcement 2/80

LOG OF SOIL BORING

PROJECT: PRELIMINARY SOIL INVESTIGATIONS

JOB NO.: 085

LOCATION (PARISH): CENTRAL VALLEY PARK SCHOOL, BATON ROUGE (EBR)

BORING NO.: B-2

DATE: 11/30/81

DRILLING CONTRACTOR: -

/ENGR.: N.M. DAVE

DRY AUGER

DRILL RIG Hand Auger

WASH BORING

GROUND WATER LEVELS	DEPTH (feet)	SAMPLING	SPT (blows/foot) or P (TSF)	LABORATORY DATA: COMPRESSIVE STRENGTH (TSF)	M C (%)	D D (PCF)	L L (%)	P I (%)		DESCRIPTION OF STRATA
		▨	GL - ½'							Soft gray and tan silty clay with brick fragments (fill)
*	2.5	▨	2.5'							with sand and rootlets gasoline odor
										Boring terminated at 3'
	5.0									
	7.5									
	10									

KEY

- SHELBY TUBE
- STANDARD PENETRATION TEST
- GROUND WATER FIRST ENCOUNTERED
- STATIC GROUND WATER LEVEL (AFTER ______ HOURS)
- Disturbed Soil Sample
- P POCKET PENETROMETER
- M C MOISTURE CONTENT
- D D DRY DENSITY
- L L LIQUID LIMIT
- P I PLASTICITY INDEX

REMARKS

* Water seepage at 3 feet

LA FORM 81-01

OFFICE OF ENVIRONMENTAL AFFAIRS
LOUISIANA DEPARTMENT OF NATURAL RESOURCES

LOG OF SOIL BORING

PROJECT: PRELIMINARY SOIL INVESTIGATIONS **JOB NO.:** 085

LOCATION (PARISH): CENTRAL VALLEY PARK SCHOOL, BATON ROUGE (EBR) **BORING NO.:** B-3 **DATE:** 11/30/81

DRILLING CONTRACTOR: **ENGR.:** N.M. DAVE

GROUND WATER LEVELS	DEPTH (feet)	SAMPLING	SPT (blows/foot) or P (TSF)	LABORATORY DATA: COMPRESSIVE STRENGTH (TSF)	M C (%)	D D (PCF)	L L (%)	P I (%)		DRY AUGER / WASH BORING — DRILL RIG: HAND AUGE. DESCRIPTION OF STRATA
										Soft gray silty clay (fill)
		▨	2'-2¼'							w/-metals - slight gasoline odor
	2.5	▨	2 3/4-3'							Soft gray and tan silty clay with sand--slight odor (fill)
		▨	4'-4¼'							Soft gray clay with metal pieces (beer cans) (fill) -- very soft --
▼	5.0	▨	5'-5½'							
	7.5	▨	7'-7¼'							Clayey sand with metal (fill)
										Boring terminated at 7¼'
	10									

KEY

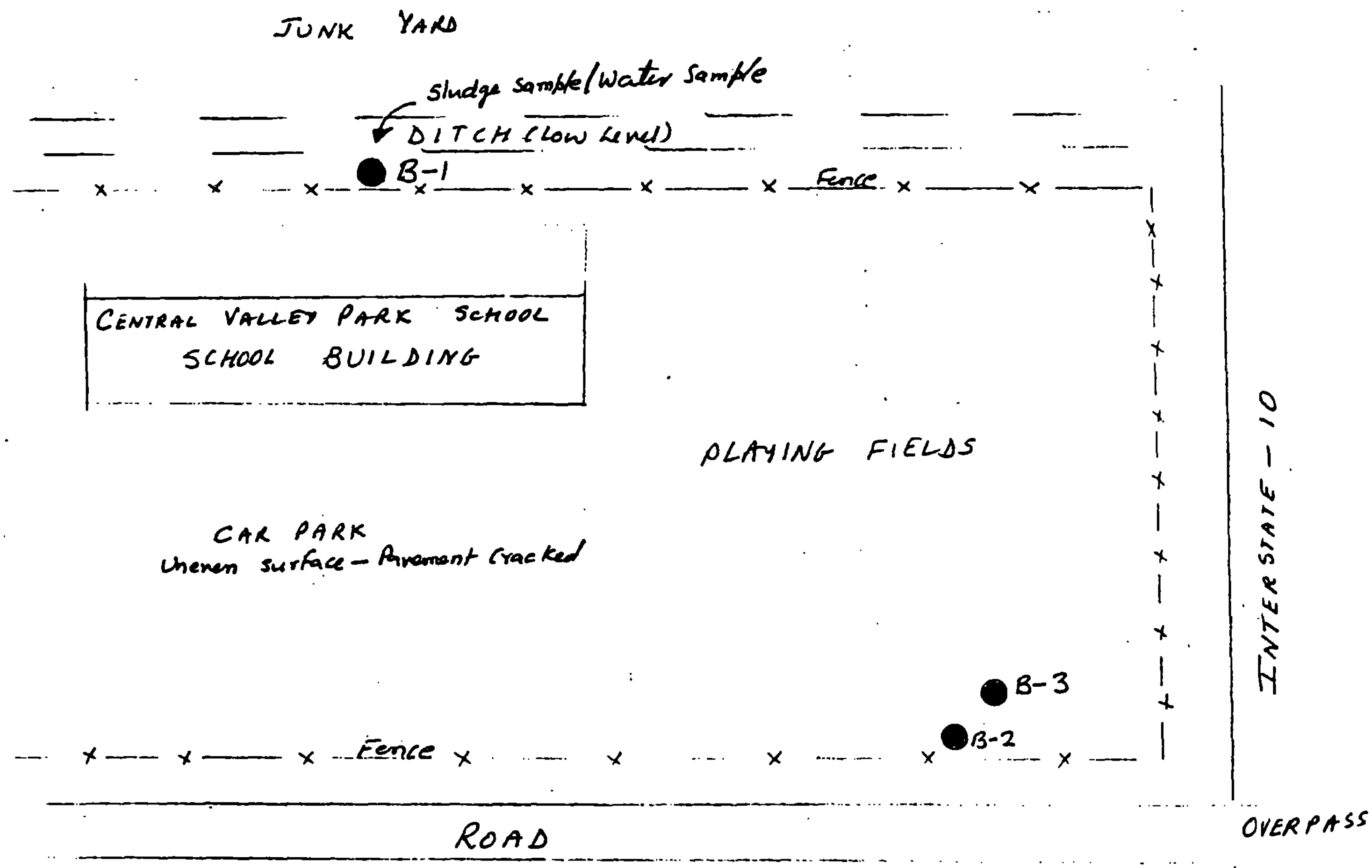
- SHELBY TUBE
- STANDARD PENETRATION TEST
- GROUND WATER FIRST ENCOUNTERED
- STATIC GROUND WATER LEVEL (AFTER ______ HOURS)
- ▨ Disturbed Soil Sample
- P POCKET PENETROMETER
- M C MOISTURE CONTENT
- D D DRY DENSITY
- L L LIQUID LIMIT
- P I PLASTICITY INDEX

REMARKS

LA FORM 81-01

OFFICE OF ENVIRONMENTAL AFFAIRS
LOUISIANA DEPARTMENT OF NATURAL RESOURCES

RECEIVED
DEC 4 1981
Department of Natural Resources
Hazardous Waste Management



APPROX BORING LOCATIONS
PLAN NOT TO SCALE

/3

REFERENCE NO.

7

A Preliminary Environmental Assessment

East Valley Park Middle School Landfill Site

Prepared by:

Dr. John M. Hill - Photointerpretation
Assistant Professor

Dr. Ronald F. Malone - Chemical Analysis
Assistant Professor

David S. Burden
Research Assistant

Submitted to:

Louisiana Department of Natural Resources

October 1982

Introduction

The Valley Park Middle School and the Valley Park Recreational Playground are located on top of a historic municipal landfill site. This observation was brought to the attention of this report's authors in the summer of 1981. A preliminary review at that time indicated that there was very little information available on the site and no recent studies had been conducted to determine what impact, if any, the landfilled wastes were having on the school ground, adjacent waterways, and ground waters underlying the site. This prompted an informal investigation conducted by a number of graduate students, undergraduate students, and faculty members with the objective of gathering or developing a data base to assist in evaluation of potential impacts of the site. This report summarizes the findings of that investigation.

Site History

The waste disposal site is located in East Baton Rouge Parish, Baton Rouge, Louisiana. The site location is outlined in black in Figure 1. This tract of land is currently the site of the Valley Park Middle School (north of Route I-10) and Valley Park Recreational Playground (south of Route I-10). The land on which Valley Park Middle School and Valley Park Recreational Playground now stand has undergone several changes from 1941 to 1981.

A series of historical aerial photographs were obtained to show these changes. In 1941 (Figure 2A), the tract of land on which the school and recreational playground now stand was mainly used for agricultural purposes. Most of the northern segment had been cleared while the southern segment remained forested. The photograph acquired in 1953 (Figure 2B), depicts major earth moving activities on the entire

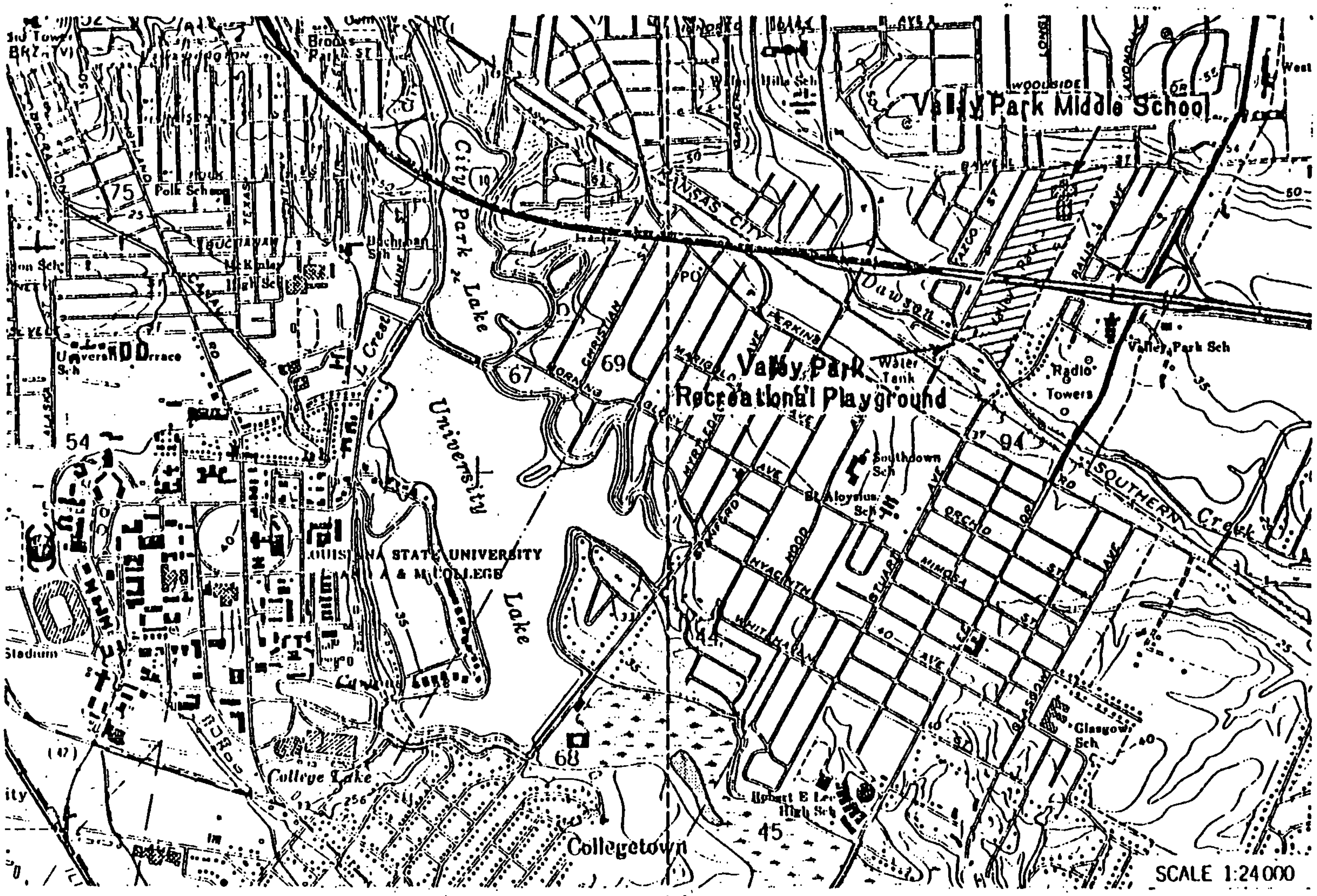
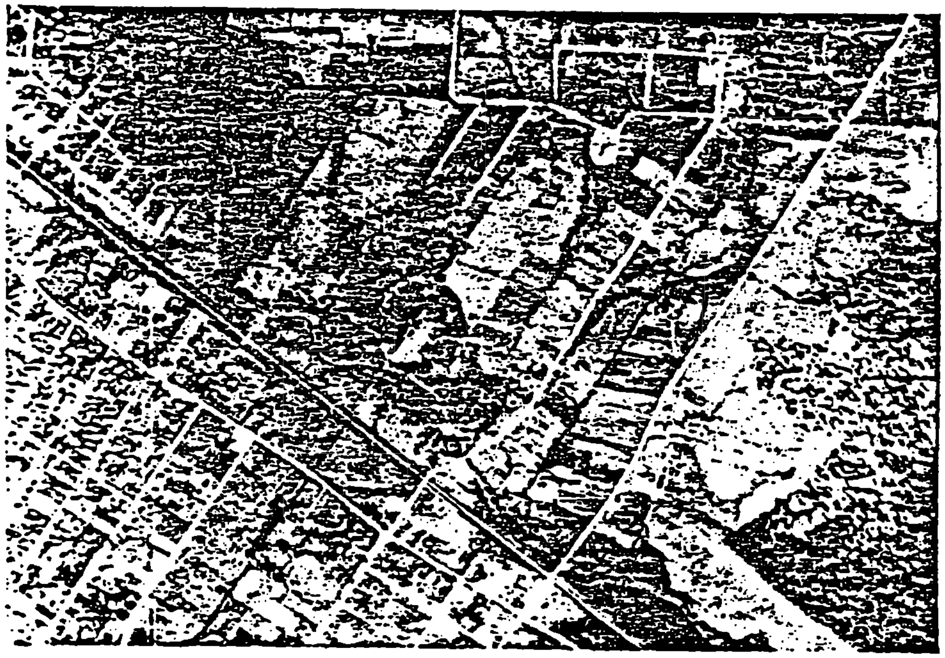


Fig. 1. Baton Rouge area map, showing the location of the old waste disposal site and the existing Valley Park Middle School and Playground.

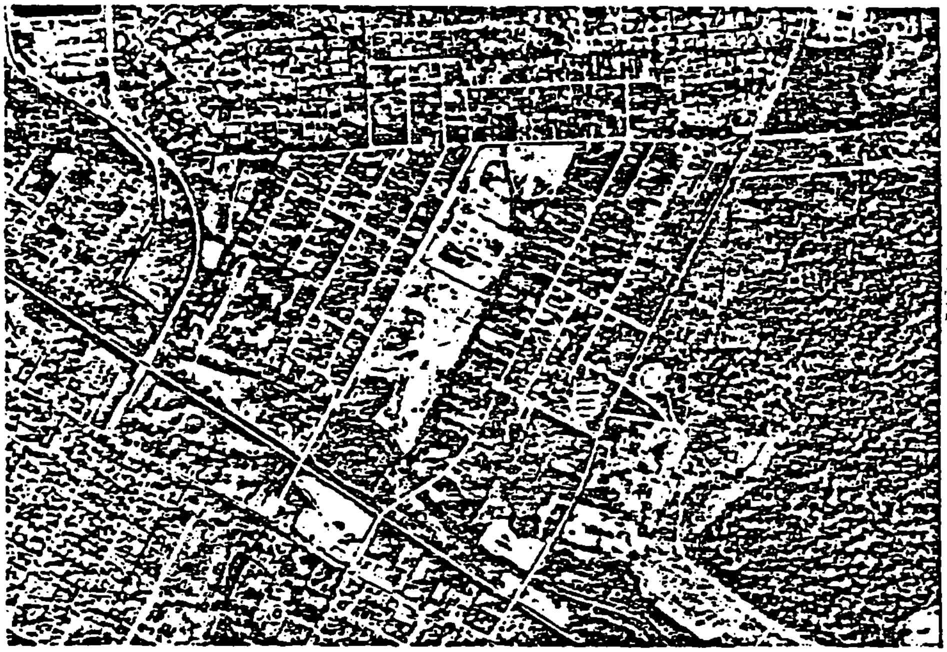


(A)

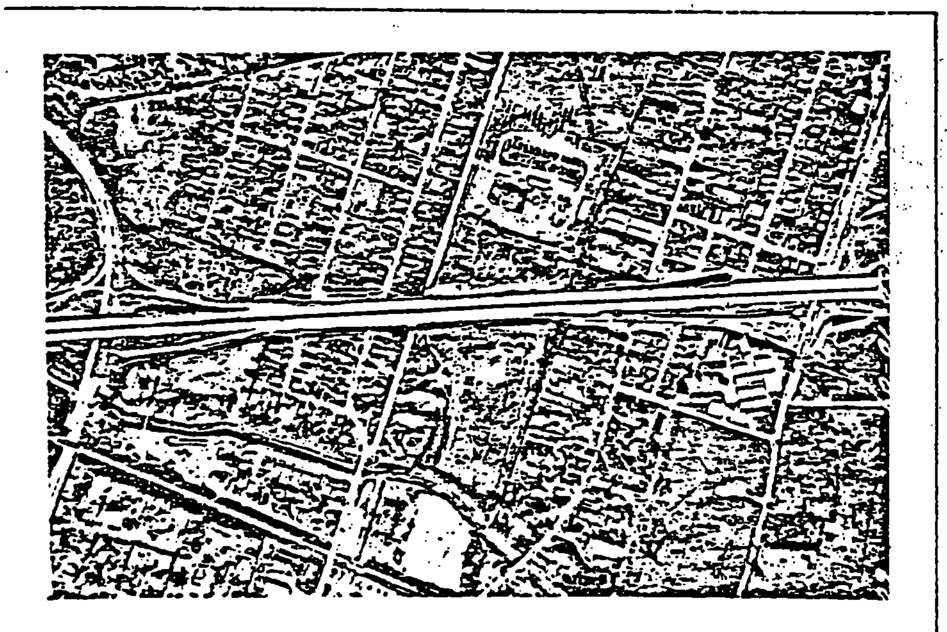
(B)

Fig. 2. Historic aerial photographs of the Valley Park site taken in (A) 1941 and (B) 1953.

northern half of the site and evidence of dumping activity on the southern segment. From 1941 to 1953, the once relatively rural area surrounding the present school and recreational playground was built up considerably. Residential housing at this time bordered the north, east and west sides of the site. The 1959 (Figure 3A) aerial photograph depicts the location of active dumping on the site in the form of mounded disposed materials. The density of houses in areas surrounding the site again increased from 1953 to 1959. During the operating period of the dump site, records as to the types of materials placed in the dump were not kept, according to the Department of Natural Resources and Health Department personnel (4). Therefore, it is possible the dump could contain industrial waste as well as municipal waste. Construction of a segment of Route I-10 across the dump site took place from 1964 to 1965. During construction, crews and nearby residents of the area complained of foul odors due to excavation of the dump site (5). The 1965 aerial photograph (Figure 3B) depicts mounded (dumped) material (potentially mounds of soil) at the southern side of Interstate 10 which now bisects the site down the middle in an east-west direction. A large portion of the northern segment was apparently being used as a storage facility for construction related materials. The school was not yet built and parallel ponds of water were visible on the area where the playground and parking lot exist today. The 1981 aerial photograph (Figure 4) represents Valley Park Middle School and Recreational Playground as they exist today. The urban and commercial areas surrounding the site have continued to expand. Parallel lines of ponded water can be seen on the ground between the school and the interstate. These lines are in the approximate location as those parallel water bodies



(A)



(B)

Fig. 3. Historic aerial photographs of the Valley Park site taken in (A) 1959 and (B) 1965.

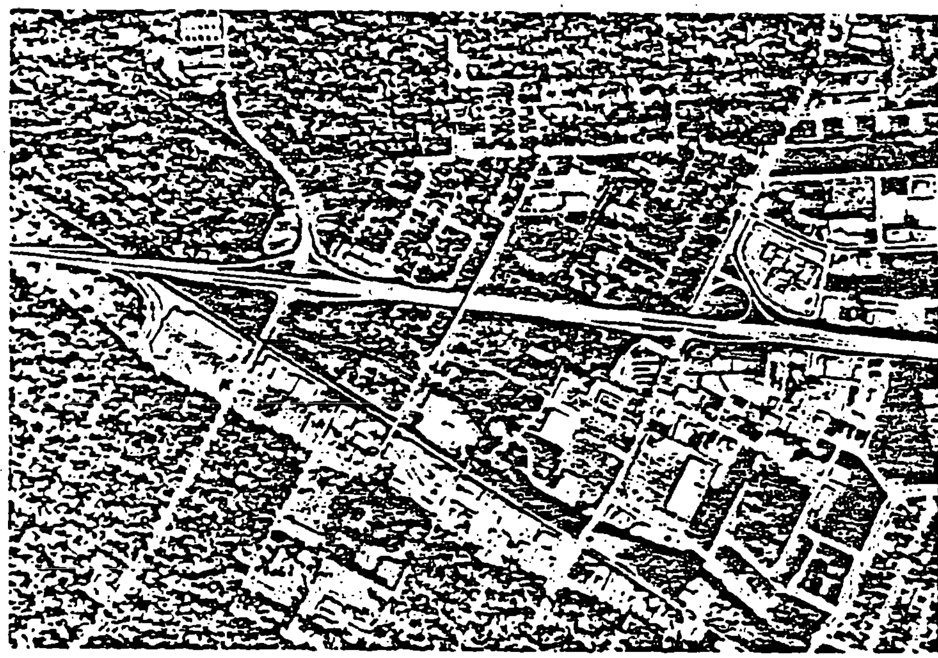


Fig. 4. Historic aerial photograph of the Valley Park site taken in 1981.

that were visible in the 1965 aerial photograph. An explanation of this ponding is presented in the next section of this report.

School Ground Overview

The land on which the school and recreational playground presently stand was formerly a portion of Lot 42, Richland Plantation Subdivision. According to records of the Parish of East Baton Rouge, the East Baton Rouge Parish School Board acquired the land through a land swap with the City of Baton Rouge on August 23, 1965. Construction of Valley Park Middle School, north of Route I-10, began in 1966. The 1959 aerial photograph indicates that dumping did take place on the northern most segment of the land where the school building and parking lot presently stand. A number of mechanisms by which the landfill could adversely affect the school ground activities were considered. These include structural damage to foundations and roadways, accumulation of noxious or ignitable gases, and accumulation of hazardous chemicals in surface soils.

The most evident effect at the East Valley Park School is the damage to the parking lot due to subsidence. Subsidence is the result of settling that occurs as loosely packed wastes compress and decompose over time. This causes a differential lowering of the ground's surface. The school playground, south of the parking lot, consists of a series of peaks and troughs which run somewhat parallel to Nairn Drive (Fig. 5). The peaks and troughs continue across the parking lot in a northeast-southwest direction. It has been suggested that this damage may be attributed to the "East Baton Rouge Fault" which is known to pass near the school site. The nature and orientation of the damage and a lack of a similar subsidence pattern in nearby neighborhoods do not support this

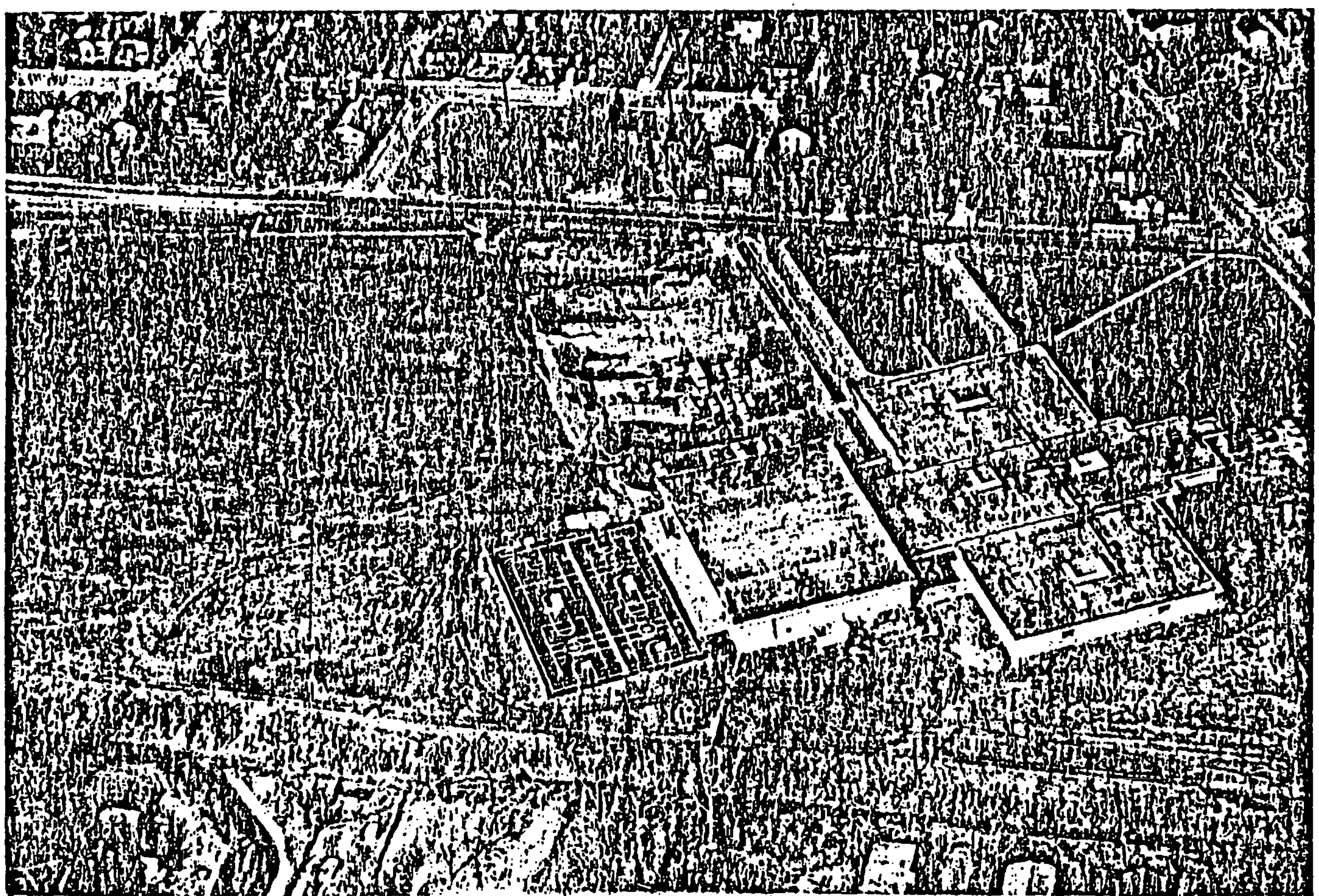


Fig. 5. 1982 aerial photograph of Valley Park Middle School dipecting the subsidence and ponding in the school's parking lot and playground.

supposition. Further, settlement of this type was clearly anticipated (7) in the school ground design. It is concluded that the observed damage is attributable, in a large part, to subsidence occurring in historic fill areas within the site.

The possibility of future subsidence was clearly considered in the foundation design for the school building. Foundation recommendations (7) include the statement; ". . . the sanitary fill cannot be used for any foundation support whatsoever. A foundation penetrating the fill and resting in the underlying Pliestocene clay must be used." This recognition, plus the fact that the [redacted] itself was built over shallower fill, leads to the conclusion that it is unlikely that the school building itself has been adversely impacted by the subsidence. It is not known if the building is routinely subject to inspections.

The second area considered deals with the possible impact of gases generated from the decomposing wastes. Municipal landfills are known to generate gases as a result of waste decomposition for many decades after a landfill's closure. [redacted] gases generated are carbon dioxide (CO_2), methane (CH_4), and occasionally hydrogen sulfide (H_2S). These gases are produced as end products of anaerobic decomposition that occurs in the buried wastes. The impact of these gases are varied.

Hydrogen sulfide produces noxious odors similar to those associated to rotten eggs. Hydrogen sulfide may, for instance, be one of the gases that contributed to the odor problems which occurred when the freeway was constructed.

Carbon dioxide is a relatively harmless gas. It can contribute indirectly to vegetation damage or leachate quality through its effects on the pH of groundwaters. Increasing carbon dioxide levels tend to lower pH which increases the mobility of a number of heavy metals. In some cases, alteration of pH of soils have caused damage to surrounding vegetation.

[redacted] is commonly known as [redacted]. It is the same [redacted] that is used in homes for [redacted] and [redacted] purposes. It is [redacted] in large quantities from [redacted]. This production is [redacted] the gas accumulates in [redacted] (generally in the range of 4 to 15 percent by volume).

This preliminary investigation of gas generation has not included onsite surveys. [redacted] surveys should be conducted to determine if methane [redacted] If such accumulations are present, they will probably be found in the [redacted] or [redacted], and under pavements or foundations which will tend to trap these gases. The nature of the soils used to cap the wastes appear to be principally silty clays or clayey silts. These [redacted] may have permitted the [redacted] of the [redacted] to the atmosphere over the years minimizing the potential of gas accumulation.

The final mechanism of possible impact on the school ground relates to the accumulation of chemicals in the topsoils on the site. [redacted] The area's wet climate and the existence of stormdrains and drainage ditches through and adjacent to the site would tend to indicate water movement down through the topsoils, then laterally through the wastes to these low lying drainage points. This pattern of water movement would not tend to lead to the accumulation of chemical residual on the ground's surface.

Surface Waters Analyses

Two major and one minor drainage channels originally bordered the school site (Fig. 1). The drainage channel which borders the eastern side of the site is referred to as the lateral stream. Until 1966, the lateral flowed across the northeast corner of the dump site, then flowed southwest along the eastern border until it joined Dawson Creek. The lateral stream appeared channelized in the 1953 aerial photograph and again slightly modified in the 1959 photograph. The lateral stream was apparently covered with the construction of the school and the minor stream at the northeast corner of the site became the major drainage system in that area. It presently emerges from the south side of Badwell Street and flows in a southwesterly direction along the eastern boundary of the school and recreational playground where it joins Dawson Creek. Dawson Creek borders the southern end of the recreational playground and its path has not been altered. The lateral stream is presently the site of illicit dumping which ranges from discarded television sets to household garbage (Fig. 6).

A ground survey of the lateral stream took place during March and April of 1982. On March 11, 1982 initial observations were made to locate possible sampling stations from which to [redacted] Then on [redacted] were taken from [redacted]s along the lateral stream (Fig. 7). At the time the samples were taken, temperature, dissolved oxygen, and pH measurements were also recorded. Biochemical Oxygen Demand (BOD) tests were conducted in triplicate in the laboratory on each sample. This BOD test was conducted because it

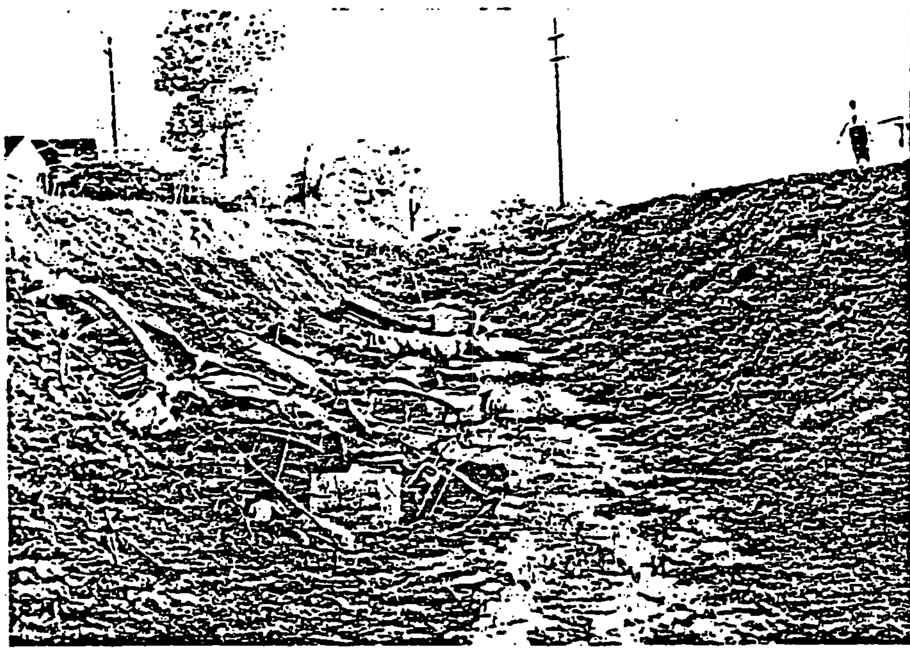


Fig. 6. A ground based 1982 photograph of the lateral stream depicting illicit dumping.

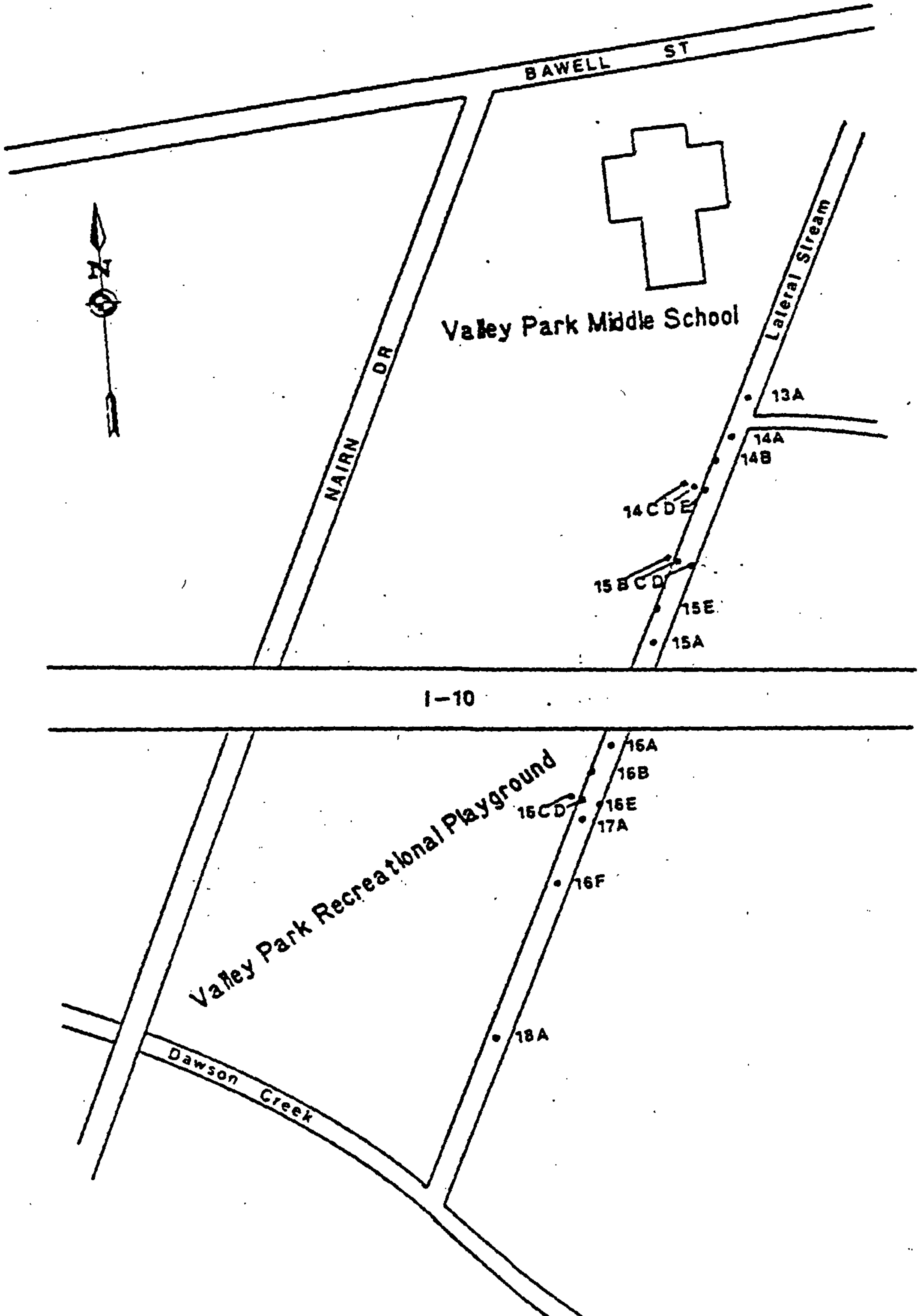


Fig. 7. Geographic representation of sample station locations along the lateral stream.

Table 1

BOD_5, Temperature, Field Dissolved Oxygen, and pH Readings from Six Lateral Stream Sampling Stations

Station #	BOD_5 (mg/l)	Temp (°C)	Field D.O. (mg/l)	pH
13A	4.3	17	8.9	6.9
14A	12.0	29	8.9	7.5
15A	67.3	28	0.4	7.2
16A	14.2	25	6.0	7.6
17A	19.5	27	3.1	7.6
18A	14.8	27	4.8	7.7

is the most important test in stream pollution control and in regulatory work for it serves as a means of checking on the quality of effluents being discharged into such waters (3). Two of the sampling stations (#15A and #16A) appeared to be located opposite active leachate plumes. Observation of the BOD results (Table 1) indicates a range of 4.3 to 67.3 mg/l BOD for the lateral stream. Water samples taken from the most upstream Station #13A, exhibited the lowest BOD concentration of 4.3 mg/l. Station #15A, opposite the largest active leachate plume, exhibited the highest BOD with a concentration of 67.3 mg/l. Strong organic odors were noticed at Station #15 during sampling. In a study conducted in Cincinnati, Ohio, it was reported that the average BOD concentrations from rainfall and urban runoff, with samples taken from a residential-light commercial area, fall into the range of 16-17 mg/l (2). The majority of the BOD values, with the exception of station #15, obtained from the lateral stream, fall into the BOD range resulting from rainfall and urban runoff.

On April 28, 1982, nineteen soil-sediment samples were collected from the lateral stream bed and from the east and west banks of the lateral stream, adjacent to the Valley Park Middle School and the Recreational Playground (Fig. 7). The purpose of this sampling program was to utilize soil-sediment analysis as a long term indicator of landfill leachate quality and its ultimate impact on the lateral stream and the surrounding soils. After running these samples through a digestion technique using hydrochloric acid, they were analyzed for seventeen metals using an inductively coupled plasma atomic emissions spectrophotometer. Of the seventeen metals analyzed for, only five (Zn, Cd, Pb, As and P) will be presented (Table 2). These five metals were selected based on the concentrations found and their possible significance. Table 2 summarizes these data from the nineteen sample stations.

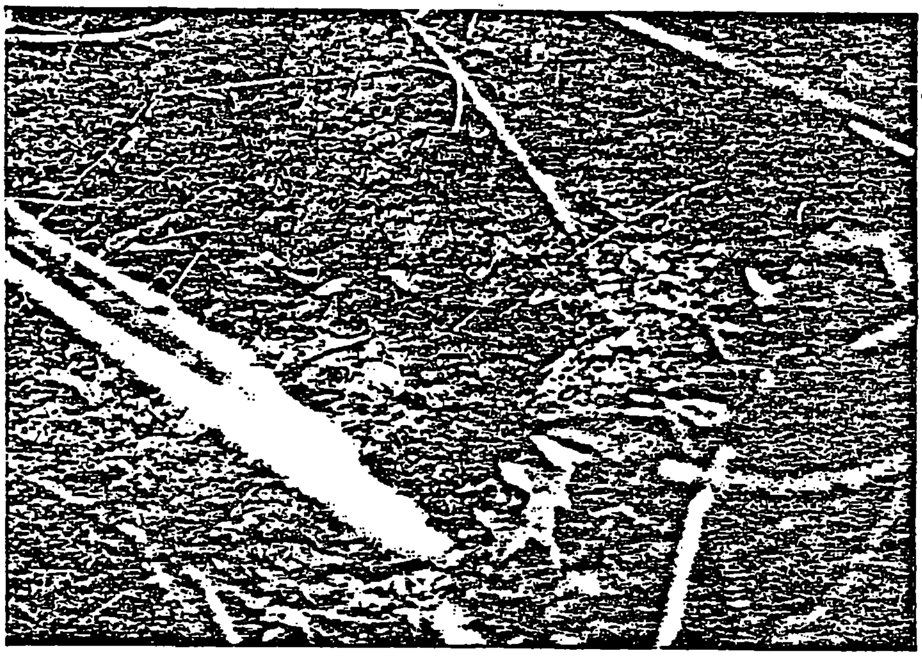
The April 28, 1982 sampling program followed a week of heavy rain. Nevertheless, many of the soil-sediment samples contained elevated levels of zinc, cadmium, and lead. Arsenic concentrations in the first two leachate streams (sample #14C and 15C) were a factor of ten higher than the upstream soils.

These initial surveys identified two leachate plumes which were actively discharging into the lateral stream. Additional data is required to determine the extent of the impact of these leachate plumes. Visual inspection of the plumes (Figures 8A and 8B) and the analysis indicate that significant levels of heavy metals and organic material are discharged to the lateral stream during certain parts of the year.

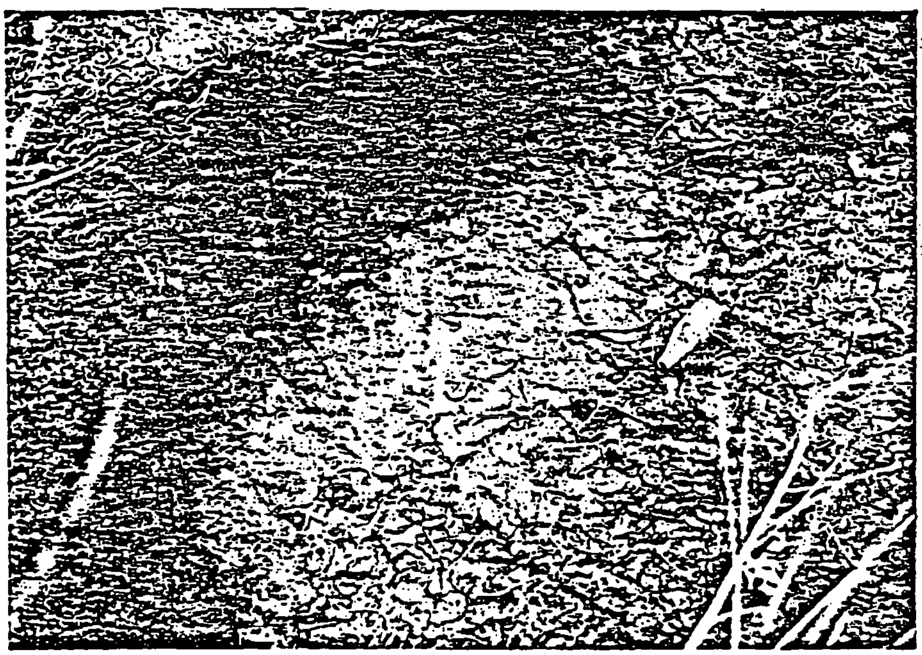
Table 2

Valley Park Lateral Metals Analyses in Soil Sediment

Sample Point	Description	Zn ($\mu g/g$)	Cd ($\mu g/g$)	Pb ($\mu g/g$)	As ($\mu g/g$)	P ($\mu g/g$)
13A	Stream sediment - North of junction with branch	169	2.6	88	0.9	530
14A	Stream sediment - South of junction with branch	157	3.2	200	0.7	860
14B	West band of lateral - South of sample point 14A	292	3.7	454	2.4	941
14C	Head of inactive leachate plume	300	13.0	1120	20.0	2270
14D	Leachate stream sediment at midway point to lateral	170	3.0	259	1.0	714
14E	West bank of lateral at inlet point of leachate	99	2.8	59	5.1	575
15B	Leachate stream sediment at midway point to lateral	68	7.2	60	20.0	4673
15C	West bank of lateral at second leachate plume	81	7.7	71	21.0	3210
15D	East bank of lateral across from second leachate plume	195	3.0	163	5.3	715
15E	West bank of lateral south of second leachate plume	87	7.7	83	24.0	4383
15A	Lateral stream sediment - North of Interstate 10	59	2.9	24	2.3	777
16A	Lateral stream sediment - South of Interstate 10	88	3.1	110	8.2	511
16B	West bank of lateral - Upstream of third leachate plume	55	2.0	82	6.5	577
16C	Third leachate plume sediment prior to mixing with lateral	58	16.0	90	53.0	12335
16D	West bank of lateral at third leachate plume input	62	4.3	44	8.3	1415
16E	East bank of lateral across from third leachate plume	78	2.6	63	6.2	683
17A	Lateral stream sediment at leachate plume	77	2.8	67	1.1	373
16F	Lateral stream sediment south of leachate plume	100	2.8	212	9.1	675
18A	Lateral stream sediment north of Dawson Creek	80	2.8	38	4.5	507



(A)



(B)

Fig. 8. Ground-based photographs of sampling sites.

Leachate plumes of this type tend to discharge in a seasonal cycle. This makes assessment of impact from a single survey impossible. Analysis of the impact of the leachate plumes is further complicated by the extremely poor quality of water found in the lateral stream by the time it reaches the Interstate 10. Although this degradation of water qualify could be attributed to water input from the "branch" and from a questionable laundry-mat, leachate discharges found on the west bank are clearly major contributors.

Groundwater Considerations

Damage to groundwater supplies can occur when leachates produced (as infiltrating rainwater comes in contact with buried wastes) percolate or flow into subsurface sand layers. The resulting poor water quality of the leachates could render the groundwater supply unusable.

Observations at the Valley Park site indicate that infiltration of rainwater is occurring on the site. This is the result of: (a) the large amount of rain received in the area each year, (b) the ponding that occurs on the site as a result of subsidence, (c) the type of vegetation (grasses) which predominate on the site, and (d) the type of soils used to cap the landfill. This infiltrated rainwater must eventually come out either through movement into the groundwater and/or through surface discharge (leachate plumes). The latter situation has been clearly observed.

Review of soil profiles developed historically on the site (7,8) indicate that the site is underlain largely by silty clays. This type of soil inhibits groundwater movement. That is to say, that they would tend to protect water producing sand layers from leachates. The soil borings reviewed, therefore, indicate that groundwater contamination would not be a problem at this site.

Summary

The following observations can be drawn from this review.

1. The impact of subsidence on the site is likely to be limited to damage to the parking lot and the creation of low lying areas which may pond after rainfall.
2. Leachate plumes exist in the drainage ditch (the "lateral" stream) which lies outside the east school ground fence. These plumes adversely impact the quality of water in the lateral and are likely to contain high levels of metals and organic chemicals.
3. No information was acquired that addressed the question of gas generation at the Valley Park Landfill site.
4. No information was acquired that indicated accumulation of chemicals in the topsoil of the school ground. This is unlikely, but random samples across the school ground could be collected in any future study.
5. A review of existing information indicated that groundwater contamination would probably be inhibited by underlying soil conditions.

Recommendations

Based on the information gathered in this study, the fol'owing recommendations are made.

1. A study should be undertaken to determine if methane gases are produced from the buried waste. This study should

include an onsite survey of gas levels in areas likely to accumulate gases.

2. A study should be conducted to confirm that chemicals have not accumulated in the topsoil of the school ground.

3. A study should be undertaken with the objective of determining what impact the leachate plumes may have on the lateral stream and Dawson Creek. If appropriate, measures to control the leachate generation, such as capping or grading of the site, should be considered.

4. A study should be undertaken to investigate the condition of utility lines running from the street to the school building in areas of subsidence.

5. Consideration should be given to cleaning up the lateral stream. Dumped materials and questionable discharges to the lateral and branch should be addressed to correct existing unsanitary conditions.

<u>References</u>

1. Lakes Restoration Project, Second Annual Report, City-Parish of Baton Rouge, Louisiana, Oct. 1977, p. E-12.
2. Laws, E. A., "Urban Stormwater Runoff," <u>Aquatic Pollution</u>, John Wiley and Sons, New York, NY, 1981, p. 92.
3. Sawyer, C. N., and McCarty, P. L., "Biochemical Oxygen Demand," <u>Chemistry for Environmental Engineering</u>, 3rd ed.; McGraw-Hill Book Co., New York, NY, 1978, p. 416.
4. Personal Communication with the Department of Health and Human Resources (Mr. Ezell) and with the Department of Natural Resources (Mr. Tim Knight), July 1982.

REFERENCE NO.

8

gsri GULF SOUTH RESEARCH INSTITUTE
Post Office Box 26518 New Orleans, Louisiana 70186 Telephone 504 283-4223

December 21, 1982
GSRI-33e

Mr. Gerald D. Healy, Jr.
Administrator
Hazardous Waste Management Division
Department of Natural Resources
P.O. Box 44396
Baton Rouge, Louisiana 70804

Subject: GSRI Project No. 328-A79-21
DNR Contract No. 28500-82-11

Dear Mr. Healy:

Please find enclosed a copy of the final report for the samples which were received in our laboratory on December 6, 1982. You will note some minor changes from the preliminary data summary which was submitted on December 13, 1982. Some of the pollutants originally reported as "Present" in trace quantities were later found to be laboratory artifacts. These results have been changed to "ND," not detected, per our customary reporting practice.

Please call me if you have any questions.

Sincerely,

James E. Henderson

James E. Henderson, Ph.D.
Manager, Analytical
Chemistry Department

JEH/cp
Enclosures: Original copy of report
Invoice

Copy: Frank Dautriel

GULF SOUTH RESEARCH INSTITUTE
Post Office Box 26518 New Orleans, Louisiana 70186 Telephone 504 283-4223

Final Report

DNR Contract Number 28500-82-11
Project Number 328-A79-21

PRIORITY POLLUTANT AND MISCELLANEOUS ANALYTICAL DETERMINATIONS

Prepared for:

Hazardous Waste Management Division
Department of Natural Resources
P.O. Box 44396
Baton Rouge, Louisiana 70804

Prepared by:

James E. Henderson
Manager, Analytical Chemistry Department
Gulf South Research Institute

December 21, 1982

TABLE 1. ANALYTICAL RESULTS FOR SEMIVOLATILE ORGANIC PRIORITY POLLUTANTS

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: mg/Kg, dry weight	8201 -0681	8205 -0682	8210 -0683	8212 -0684
Compound				
Base-neutrals				
1,3-dichlorobenzene	ND	ND	ND	ND
1,4-dichlorobenzene	ND	ND	ND	ND
hexachloroethane	ND	ND	ND	ND
bis(2-chloroethyl)ether	ND	ND	ND	ND
1,2-dichlorobenzene	ND	ND	ND	ND
bis(2-chloroisopropyl)ether	ND	ND	ND	ND
n-nitrosodi-n-propyl amine	ND	ND	ND	ND
nitrobenzene	ND	ND	ND	ND
hexachlorobutadiene	ND	ND	ND	ND
1,2,4-trichlorobenzene	ND	ND	ND	ND
isophorone	ND	ND	ND	ND
naphthalene	ND	ND	ND	ND
bis(2-chloroethoxy)methane	ND	ND	ND	ND
hexachlorocyclopentadiene	ND	ND	ND	ND
2-chloronaphthalene	ND	ND	ND	ND
acenaphthylene	ND	ND	ND	ND
acenaphthene	Trace	ND	ND	Trace
dimethyl phthalate	ND	ND	ND	ND
2,6-dinitrotoluene	Trace	ND	ND	ND

ND = "Not Detected". The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

(Continued)

TABLE 1. Continued

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: mg/Kg, dry weight	8213 -0685	8214 -0686	8215 -0687	Minimum Detection Limit
Compound				
Base-neutrals				
1,3-dichlorobenzene	ND	ND	ND	0.1
1,4-dichlorobenzene	ND	ND	ND	0.1
hexachloroethane	ND	ND	ND	0.1
bis(2-chloroethyl)ether	ND	ND	ND	0.1
1,2-dichlorobenzene	ND	ND	ND	0.1
bis(2-chloroisopropyl)ether	ND	ND	ND	0.1
n-nitrosodi-n-propyl amine	ND	ND	ND	0.1
nitrobenzene	ND	ND	ND	0.1
hexachlorobutadiene	ND	ND	ND	0.1
1,2,4-trichlorobenzene	ND	ND	ND	0.1
isophorone	ND	ND	ND	0.1
naphthalene	ND	ND	ND	0.1
bis(2-chloroethoxy)methane	ND	ND	ND	0.1
hexachlorocyclopentadiene	ND	ND	ND	0.1
2-chloronaphthalene	ND	ND	ND	0.1
acenaphthylene	ND	ND	ND	0.1
acenaphthene	ND	ND	ND	0.1
dimethyl phthalate	ND	Trace	Trace	0.1
2,6-dinitrotoluene	ND	ND	ND	0.1

ND = "Not Detected". The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

NA = Data were not available.

(Continued)

TABLE 1. Continued.

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: mg/Kg, dry weight	8201 -0681	8205 -0682	8210 -0683	8212 -0684
Compound				
fluorene	Trace	ND	ND	Trace
4-chlorophenyl phenyl ether	ND	ND	ND	ND
2,4-dinitrotoluene	ND	ND	ND	ND
diethyl phthalate	ND	ND	Trace	Trace
1,2-diphenylhydrazine	ND	ND	ND	ND
n-nitrosodiphenylamine	ND	ND	ND	ND
hexachlorobenzene	ND	ND	ND	ND
4-bromphenyl phenyl ether	ND	ND	ND	ND
phenanthrene	1.0	Trace	ND	0.4
anthracene	0.1	ND	ND	Trace
dibutyl phthalate	ND	0.2	0.7	0.8
fluoranthene	2.3	0.1	ND	0.6
pyrene	0.8	Trace	ND	0.2
benzidine	ND	ND	ND	ND
butyl benzyl phthalate	ND	ND	Trace	ND
bis(2-ethylhexyl)phthalate	0.7	0.8	0.2	ND
chrysene	0.6	Trace	ND	0.1
benzo(a)anthracene	0.5	Trace	ND	0.1
3,3'-dichlorobenzidine	ND	ND	ND	NA
di-n-octyl phthalate	ND	ND	ND	NA

ND = "Not Detected". The presence of each compound would have been observed if the respective concentration had been at or above the detection minimum limits listed.

NA = Data were not available.

(Continued)

TABLE 1. Continued.

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: mg/Kg, dry weight	8213 -0685	8214 -0686	8215 -0687	Minimum Detection Limit
Compound				
fluorene	ND	ND	ND	0.1
4-chlorophenyl phenyl ether	ND	ND	ND	0.1
2,4-dinitrotoluene	ND	ND	ND	0.1
diethyl phthalate	ND	ND	ND	0.1
1,2-diphenylhydrazine	ND	ND	ND	0.1
n-nitrosodiphenylamine	ND	ND	ND	0.1
hexachlorobenzene	ND	ND	ND	0.1
4-bromphenyl phenyl ether	ND	ND	ND	0.1
phenanthrene	Trace	Trace	Trace	0.1
anthracene	ND	Trace	ND	0.1
dibutyl phthalate	ND	1.5	ND	0.1
fluoranthene	Trace	Trace	Trace	0.1
pyrene	Trace	Trace	Trace	0.1
benzidine	ND	ND	ND	0.1
butyl benzyl phthalate	ND	7.3	ND	0.1
bis(2-ethylhexyl)phthalate	ND	5.7	1.4	0.1
chrysene	Trace	Trace	Trace	0.1
benzo(a)anthracene	Trace	Trace	ND	0.1
3,3'-dichlorobenzidine	ND	ND	ND	0.1
di-n-octyl phthalate	ND	ND	ND	0.1

ND = "Not Detected". The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

NA = Data were not available.

(Continued)

TABLE 1. Continued.

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: mg/Kg, dry weight	8201 -0681	8205 -0682	8210 -0683	8212 -0684
Compound				
benzo(b)fluoranthene	0.5	Trace	ND	0.2
benzo(k)fluoranthene	1.0	*	ND	*
benzo(a)pyrene	0.7	ND	ND	ND
indeno(1,2,3-c,d)pyrene	0.3	ND	ND	ND
dibenzo(a,h)anthracene	ND	ND	ND	ND
benzo(ghi)perylene	0.2	ND	ND	ND
n-nitrosodimethyl amine	ND	ND	ND	ND
Acids				
2-chlorophenol	ND	ND	NA	ND
2-nitrophenol	ND	ND	ND	ND
phenol	ND	ND	ND	ND
2,4-dimethylphenol	ND	ND	ND	ND
2,4-dichlorophenol	ND	ND	ND	ND
2,4,6-trichlorophenol	ND	ND	ND	ND
4-chloro-3-methylphenol	ND	ND	ND	ND
2,4-dinitrophenol	ND	ND	ND	ND
2-methyl-4,6-dinitrophenol	ND	ND	ND	ND
pentachlorophenol	ND	ND	0.2	ND
4-nitrophenol	ND	ND	ND	ND

ND = "Not Detected". The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

NA = Data were not available.

*Could not be distinguished from benzo(b)fluoranthene.

(Continued)

TABLE 1. Continued.

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: mg/Kg, dry weight	8213 -0685	8214 -0686	8215 -0687	Minimum Detection Limit
Compound				
benzo(b)fluoranthene	ND	Trace	ND	0.1
benzo(k)fluoranthene	ND	*	ND	0.1
benzo(a)pyrene	ND	Trace	ND	0.1
indeno(1,2,3-c,d)pyrene	ND	ND	ND	0.1
dibenzo(a,h)anthracene	ND	ND	ND	0.1
benzo(ghi)perylene	ND	ND	ND	0.1
n-nitrosodimethyl amine	ND	ND	ND	0.1
Acids				
2-chlorophenol	ND	ND	ND	0.1
2-nitrophenol	ND	ND	ND	0.1
phenol	ND	ND	ND	0.1
2,4-dimethylphenol	ND	ND	ND	0.1
2,4-dichlorophenol	ND	ND	ND	0.1
2,4,6-trichlorophenol	ND	ND	ND	0.1
4-chloro-3-methylphenol	ND	ND	ND	0.1
2,4-dinitrophenol	ND	ND	ND	0.1
2-methyl-4,6-dinitrophenol	ND	ND	ND	0.1
pentachlorophenol	ND	ND	ND	0.1
4-nitrophenol	ND	ND	ND	0.1

ND = "Not Detected". The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

N = Data were not avaiable.

*Could not distinguish from benzo(b)fluoranthene.

TABLE 2. ANALYTICAL RESULTS FOR PESTICIDES AND PCBs

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: mg/Kg, dry weight	8201 -0681	8205 -0682	8210 -0683	8212 -0684
Compound				
Aldrin	ND	ND	ND	ND
a-BHC	ND	ND	ND	ND
b-BHC	ND	ND	ND	ND
d-BHC	ND	ND	ND	ND
g-BHC	ND	ND	ND	ND
Chlordane	ND	ND	ND	ND
4,4-DDD	ND	ND	ND	ND
4,4-DDE	ND	ND	ND	ND
4,4-DDT	ND	ND	ND	ND
Dieldrin	ND	ND	ND	ND
Endosulfan I	ND	ND	ND	ND
Endosulfan II	ND	ND	ND	ND
Endosulfan sulfate	ND	ND	ND	ND
Endrin	ND	ND	ND	ND
Endrin aldehyde	ND	ND	ND	ND
Heptachlor	ND	ND	ND	ND
Heptachlor epoxide	ND	ND	ND	ND
Toxaphene	ND	ND	ND	ND

ND = "Not Detected." The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

(Continued)

TABLE 2. (Continued)

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: mg/Kg, dry weight	8201 -0685	8205 -0686	8210 -0687	Minimum Detection Limit
Compound				
Aldrin	ND	ND	ND	0.1
a-BHC	ND	ND	ND	0.1
b-BHC	ND	ND	ND	0.1
d-BHC	ND	ND	ND	0.1
g-BHC	ND	ND	ND	0.1
Chlordane	ND	ND	ND	Not Determined
4,4-DDD	ND	ND	ND	0.1
4,4-DDE	ND	ND	ND	0.1
4,4-DDT	ND	ND	ND	0.1
Dieldrin	ND	ND	ND	0.1
Endosulfan I	ND	ND	ND	0.1
Endosulfan II	ND	ND	ND	0.1
Endosulfan sulfate	ND	ND	ND	0.1
Endrin	ND	ND	ND	0.1
Endrin aldehyde	ND	ND	ND	0.1
Heptachlor	ND	ND	ND	0.1
Heptachlor epoxide	ND	ND	ND	0.1
Toxaphene	ND	ND	ND	Not Determined

ND = "Not Detected." The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

(Continued)

TABLE 2. (Continued)

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: mg/Kg, dry weight	8201 -0681	8205 -0682	8210 -0683	8212 -0684
Compound				
PCB-1016	ND	ND	ND	ND
PCB-1221	ND	ND	ND	ND
PCB-1232	ND	ND	ND	ND
PCB-1242	ND	ND	ND	ND
PCB-1248	ND	ND	ND	ND
PCB-1254	ND	ND	ND	ND
PCB-1260	ND	ND	ND	ND

ND = "Not Detected." The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

(Continued)

TABLE 2. (Continued)

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: mg/Kg, dry weight	8201 -0685	8205 -0686	8210 -0687	Minimum Detection Limit
Compound				
PCB-1016	ND	ND	ND	Not Determined
PCB-1221	ND	ND	ND	Not Determined
PCB-1232	ND	ND	ND	Not Determined
PCB-1242	ND	ND	ND	Not Determined
PCB-1248	ND	ND	ND	Not Determined
PCB-1254	ND	ND	ND	Not Determined
PCB-1260	ND	ND	ND	Not Determined

ND = "Not Detected." The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

TABLE 3. ANALYTICAL RESULTS FOR VOLATILE ORGANIC PRIORITY POLLUTANTS

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: µg/Kg, dry weight	8201 -0681	8205 -0682	8210 -0683	8212 -0684
Compound				
chloromethane	ND	ND	ND	ND
vinyl chloride	ND	ND	ND	ND
chloroethane	ND	ND	ND	ND
methylene chloride	ND	ND	Trace	70.
trichlorofluoromethane	ND	ND	ND	ND
1,1-dichloroethene	ND	ND	ND	ND
1,1-dichloroethane	ND	ND	ND	ND
trans-1,2-dichloroethene	ND	ND	ND	ND
chloroform	ND	ND	Trace	ND
1,2-dichloroethane	ND	ND	ND	ND
1,1,1-trichoroethane	ND	ND	ND	ND
carbon tetrachloride	ND	ND	ND	ND
bromodichloromethane	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND
trichloroethene	ND	ND	ND	ND
dibromochloromethane	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND

ND = "Not Detected". The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

(Continued)

TABLE 3. (Continued)

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: µg/Kg, dry weight	8213 -0685	8214 -0686	8215 -0687	Minimum Detection Limit
Compound				
chloromethane	ND	ND	ND	10.
vinyl chloride	ND	ND	ND	10.
chloroethane	ND	ND	ND	10.
methylene chloride	ND	ND	ND	10.
trichlorofluoromethane	ND	ND	ND	10.
1,1-dichloroethene	ND	ND	ND	10.
1,1-dichloroethane	ND	ND	ND	10.
trans-1,2-dichloroethene	ND	ND	ND	10.
chloroform	Trace	13.	ND	10.
1,2-dichloroethane	ND	ND	ND	10.
1,1,1-trichoroethane	ND	ND	ND	10.
carbon tetrachloride	ND	ND	ND	10.
bromodichloromethane	ND	ND	ND	10.
1,2-dichloropropane	ND	ND	ND	10.
trans-1,3-dichloropropene	ND	ND	ND	10.
trichloroethene	ND	ND	ND	10.
dibromochloromethane	ND	ND	ND	10.
cis-1,3-dichloropropene	ND	ND	ND	10.

ND = "Not Detected". The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

(Continued)

TABLE 3. (Continued).

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: µg/Kg, dry weight	8201 -0681	8205 -0682	8210 -0683	8212 -0684
Compound				
1,1,2-trichloroethane	ND	ND	ND	ND
benzene	ND	ND	ND	ND
2-chloroethylvinyl ether	ND	ND	ND	ND
bromoform	ND	ND	ND	ND
tetrachloroethene	ND	ND	ND	ND
1,1,2,2-tetrachoroethane	ND	ND	ND	ND
toluene	ND	ND	ND	ND
chlorobenzene	ND	ND	ND	ND
ethylbenzene	ND	ND	ND	ND
acrolein	ND	ND	ND	ND
acrylonitrile	ND	ND	ND	ND

ND = "Not Detected". The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

(Continued)

TABLE .3 (Continued).

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: µg/Kg, dry weight	8213 -0685	8214 -0686	8215 -0687	Minimum Detection Limit
Compound				
1,1,2-trichloroethane	ND	ND	ND	10.
benzene	ND	ND	ND	10.
2-chloroethylvinyl ether	ND	ND	ND	10.
bromoform	ND	ND	ND	10.
tetrachloroethene	ND	ND	ND	10.
1,1,2,2-tetrachoroethane	ND	ND	ND	10.
toluene	ND	ND	ND	10.
chlorobenzene	ND	ND	ND	10.
ethylbenzene	ND	ND	ND	10.
acrolein	ND	ND	ND	10.
acrylonitrile	ND	ND	ND	10.

ND = "Not Detected". The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

TABLE 4. TOTAL METALS RESULTS*

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: mg/Kg, dry weight	8201 -0681	8205 -0682	8210 -0683	8212 -0684
<u>Compound</u>				
Antimony	ND	ND	0.17	0.14
Arsenic	1.5	2.3	2.5	3.2
Barium	97.	62.	160.	57.
Beryllium	ND	ND	ND	ND
Cadmium	ND	ND	ND	ND
Chromium	16.	15.	16.	11.
Copper	16.	9.3	22.	24.
Lead	100.	68.	39.	130.
Mercury	0.53	0.25	0.20	0.27
Nickel	ND	ND	4.7	ND
Selenium	ND	ND	ND	0.11
Silver	1.3	0.6	1.6	1.1
Thallium	ND	ND	ND	ND
Zinc	18.	68.	73.	64.

ND = "Not Detected." The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

*Samples were submitted to an acid digestion prior to analysis.

(Continued)

TABLE 4. Continued*

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: mg/Kg, dry weight	8213 -0685	8214 -0686	8215 -0687	Minimum Detection Limit
Compound				
Antimony	ND	ND	ND	0.04
Arsenic	1.7	2.2	2.0	0.08
Barium	56.	110.	110.	3.
Beryllium	ND	ND	ND	2.
Cadmium	ND	ND	ND	1.
Chromium	14.	12.	13.	1.
Copper	11.	21.	8.	1.
Lead	55.	45.	30.	2.
Mercury	0.21	0.16	0.19	0.004
Nickel	ND	ND	ND	3.
Selenium	ND	0.11	0.09	0.04
Silver	0.7	0.9	0.5	0.2
Thallium	ND	ND	ND	3.
Zinc	53.	85.	81.	1.

ND = "Not Detected." The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

*Samples were submitted to an acid digestion prior to analysis.

TABLE 5. LEACHATE METALS RESULTS

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: mg/L	8201 -0681	8205 -0682	8210 -0683	8212 -0684
Compound				
Antimony	ND	ND	ND	ND
Arsenic	0.021	0.0064	ND	ND
Barium	ND	0.3	ND	0.2
Beryllium	ND	ND	ND	ND
Cadmium	ND	ND	ND	ND
Chromium	0.01	ND	0.01	0.01
Copper	ND	ND	ND	ND
Lead	ND	ND	ND	ND
Mercury	0.0005	0.0007	.0003	.0003
Nickel	ND	ND	ND	ND
Selenium	ND	ND	ND	0.002
Silver	ND	ND	ND	ND
Thallium	ND	ND	ND	ND
Zinc	ND	ND	ND	ND

ND = "Not Detected." The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

(Continued)

TABLE 5. Continued

DNR Sample ID: 108/2/ GSRI Sample ID: 06DC82A7921 Concentration units: mg/L	8213 -0685	8214 -0686	8215 -0687	Minimum Detection Limit
Compound				
Antimony	ND	ND	ND	0.0012
Arsenic	ND	ND	ND	0.0012
Barium	0.2	0.2	0.4	0.1
Beryllium	ND	ND	ND	0.02
Cadmium	ND	ND	ND	0.01
Chromium	0.02	ND	ND	0.01
Copper	ND	ND	ND	0.01
Lead	ND	ND	ND	0.1
Mercury	ND	ND	ND	0.0002
Nickel	ND	ND	ND	0.1
Selenium	ND	ND	ND	0.0016
Silver	ND	ND	ND	0.01
Thallium	ND	ND	ND	0.1
Zinc	ND	ND	ND	0.01

ND = "Not Detected." The presence of each compound would have been observed if the respective concentration had been at or above the minimum detection limits listed.

NA = Data were not available.

REFERENCE NO.

9

COX • WALKER
& associates, inc.
CONSULTING ENGINEERS

TO: Councilman Ben Peabody, Jr.
430 Westmoreland
Baton Rouge, Louisiana 70806

PROJECT NO.: 212
REPORT NO.: 1
COMPLAINT DATE: 05/07/86
VISIT DATE: 05/12/86

REPORT ON VISIT TO: Valley Park Middle School

PERSON CONTACTED: Mr. James Williams, Principal

TIME OF VISIT: 11:30 am

REASON FOR VISIT: Your call requesting a check of the school area, which is the site of an old abandoned landfill.

FINDINGS: (See Attached Sheets)

RECOMMENDATIONS: There does not appear to be any evidence to indicate an immediate problem. We will make periodic checks of air in the area upon arrival of new City-Parish equipment. Should evidence of specific problems be presented, we will be happy to investigate each one and issue a report.

COPIES TO:

MAYOR-PRESIDENT
CITY-PARISH COUNCIL
PARISH ATTORNEY
Mr. Graydon Walker, EBRP School Board, P. O. Box 2950, Baton Rouge, LA 70821
Mr. James Williams, Principal, 4510 Bawell, Baton Rouge, LA 70808
Mr. Tom Purvis, 2546 College Drive, Baton Rouge, LA 70808

REPORTED BY: E. R. Cox, Jr., P. E. DATE: April 25, 1986

FINDINGS:

The Valley Park Middle School is located on top of a ...... According to a report prepared by LSU in 1982, dumping began at the site after ... before 1953, and continued until approximately 1965 when the land was acquired by the East Baton Rouge Parish School Board in a land swap with the City-Parish. In 1966 construction began on the Valley Park Middle School.

Throughout the history of this school, there apparantly has been periodic expression of concern regarding the health effects of this location. My visit was originally intended to secure some air samples to check for the presence of total hydrocarbons. However, there is no tube available for the analytical instrument I now use, so this check was not possible.

The City-Parish is now procuring, with funds appropriated by the Mayor and Metropolitan Council, a more versatile analytical instrument for the Parish Technical Representative's use. This instrument will be available in a few weeks and will allow me to make periodic checks in the area for a number of chemical substances, as well as for total hydrocarbons.

Fortunately, the State of Louisiana through the Air Quality Division's Special Monitoring Group visited the campus in December 1982 and sampled the atmosphere for the same parameter I intended to check - total organic hydrocarbons. In addition, they collected samples on charcoal tubes for later analysis in the laboratory. In all of these checks, no health problems were indentified.

Even though I was not able to make any analyses, I visited the campus in order to determine if visual inspection would indicate any conditions that would warrant immediate action by utilizing an outside laboratory.

During my visit, I walked the entire school site. There was evidence of extensive recent dirt work. School officials explained they had reworked the grounds to deal with problems caused by subsidence. There was evidence the site had been an old landfill site, but I could detect no odors, damaged vegetation or chemicals. School officials were not aware of any adverse health effects.

Following my site inspection, Mr. Williams, Principal of Valley Park, supplied me with copies of the report done by LSU and the analytical work done by the Air Quality Division. The work by the Air Quality Division, as stated above, indicates there is no reason to suspect that gases generated by the decomposing waste are causing a problem. The LSU report addresses the possible problem of accumulation of chemicals in the topsoil at the site. It states:

> "The final mechanism of possible impact on the school ground relates to the accumulation of chemicals in the topsoils on the site. It is not likely that this phenomenon has occurred at this site. The area's wet climate and the existence of stormdrains and drainage ditches through and adjacent to the site would tend to indicate water movement down through the topsoils, then laterally through the wastes to these low lying drainage points. This pattern of water movement would not tend to lead to the accumulation of chemical residual on the ground's surface."

In addition, this is a dump site which became inactive over twenty years ago. Such dumps did not usually receive hazardous waste from industrial areas because the pollution laws were much less stringent then and most such waste went into the river or out stacks. Waste deposited in old dumps was frequently burned, thus reducing the amount of material left. Considering the conditions under which such dumps were operated, and the long passage of time since closure, it would not be reasonable to expect that chemicals would remain which would pose a health hazard to people on the site.

REFERENCE NO.

10

TECHNICAL REPORT

INDUSTRIAL HYGIENE SERVICES

FORMALDEHYDE-IN-AIR-MONITORING

CLIENT

ESAT BATON ROUGE PARISH SCHOOL BOARD

MAINTENANCE SYSTEM
BATON ROUGE, LOUISIANA

JOBSITE

VALLEY PARK MIDDLE SCHOOL
PUPIL APPRAISAL CENTER
BATON ROUGE, LOUISIANA

JUNE 16, 1988

ONSITE INDUSTRIAL HYGIENIST

DANNIE KENNEDY

ARCH CONSULTING
SERVICES, INC.
4425 Floynell Dr.
Baton Rouge, LA 70809

JULY 15, 1988

ARCH CONSULTING SERVICES, INC.
4425 FLOYNELL DRIVE
BATON ROUGE, LOUISIANA 70809
(504) 291-6963

INVOICE 88140
JULY 15, 1988

TO:
E.B.R. PARISH SCHOOL BOARD MAINTENANCE
2875 MICHELLI DRIVE
BATON ROUGE, LOUISIANA 70805

ATTN: FRANK SCIMECA

PURCHASE ORDER: 794675 RE: VALLEY PARK MIDDLE SCHOOL

INDUSTRIAL HYGIENE SERVICES:

JUNE 16, 1988 SAMPLING FOR FORMALDEHYDE (2)	$ 175.00
LABORATORY COSTS (PASS THROUGH CHARGE)	50.00

TOTAL AMOUNT OF THIS INVOICE: TWO HUNDRED TWENTY-FIVE DOLLARS ($225.00)

PLEASE REMIT TO:
ARCH CONSULTING SERVICES, INC.
4425 FLOYNELL DRIVE
BATON ROUGE, LOUISIANA 70809

TERMS NET 10 DAYS

TECHNICAL REPORT

INDUSTRIAL HYGIENE SERVICES

FORMALDEHYDE-IN-AIR-MONITORING

CLIENT

EAST BATON ROUGE PARISH SCHOOL BOARD

MAINTENANCE SYSTEM
BATON ROUGE, LOUISIANA

JOBSITE
VALLEY PARK MIDDLE SCHOOL
PUPIL APPRAISAL CENTER
BATON ROUGE, LOUISIANA

JUNE 16, 1988

ONSITE INDUSTRIAL HYGIENIST
DANNIE KENNEDY

ARCH CONSULTING SERVICES, INC.
4425 FLOYNELL DRIVE
BATON ROUGE, LOUISIANA 70809

JULY 15, 1988

TABLE OF CONTENTS

ARCH CONSULTING SERVICES, INC.

July 15, 1988

Mr. Frank Scimeca
East Baton Rouge Parish School Board
2875 Michelli Drive
Baton Rouge, LA 70805

RE: Sample Analysis Report

Dear Frank Scimeca,

Enclosed are the results for the formaldehyde samples submitted on June 16, 1988 from Valley Park Middle School (Pupil Appraisal Center). Two (2) samples were collected with midget impingers utilizing NIOSH method 3500. Two additional sample results were determined by employing a direct reading instrument (Drager Detector Tubes).

Monitoring was conducted in Room 100 (Pupil Testing Area) and Room 104 (Office Area). The impinger monitors in each room indicated levels of <0.1 ppm (less than one-tenth parts per million) which is well below the established threshold limit value of 1ppm for formaldehyde. (Threshold limit values (TLV) refer to airborne concentrations of substances and represent conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse effect.) The Drager Tubes did not detect any formaldehyde in either area. The obtained findings should not pose any significant problems for employees working in these areas. The survey results are also below the ASHRAE (American Society of Heating Refrigeration and Air Conditioning Engineers) recommended ambient guideline of 0.1ppm.

The following recommendations should be considered: (1) Initiate and document a frequent inspection and maintenance program for the central air unit. (2) Establish specific smoking areas preferably away from closed in populated work areas. (3) Consider monitoring for carbon monoxide and carbon dioxide.

Thank you for letting us serve you. If any questions should arise or we can be of further assistance please feel free to call on us.

Sincerely,

Dannie Kennedy
Dannie Kennedy

4425 Floynell Dr. • Baton Rouge, LA 70809 • (504) 291-6963

ARCH CONSULTING SERVICES
4425 FLOYNELL
BATON ROUGE, LA 70809

FORMALDEHYDE ANALYSIS REPORT

Client: EAST BATON ROUGE PARISH SCHOOL BOARD
2875 MICHELLI DRIVE
BATON ROUGE, LA 70805

Jobsite: VALLEY PARK MIDDLE SCHOOL
PUPIL APPRAISAL CENTER

SAMPLE #	RESULTS / LOCATION	PERCENT CONTENT
DVP061688.B1 (IMPINGER)	POSITIVE ROOM #100 - NE TESTING ROOM	FORMALDEHYDE : <0.10ppm
DRAGER DETECTOR TUBE	NEGATIVE ROOM #100 - NE TESTING ROOM	NO FORMALDEHYDE DETECTED
DVP061688.B2 (IMPINGER)	POSITIVE ROOM #104 APPROXIMATE CENTER OF ROOM - SEVERAL PARTITIONS IN ROOM	FORMALDEHYDE : <0.10ppm
DRAGER DETECTOR TUBE	NEGATIVE ROOM #104 APPROXIMATE CENTER OF ROOM - SEVERAL PARTITIONS IN ROOM	NO FORMALDEHYDE DETECTED

Valley Park Middle School
(Now known as [illegible])
(Testing facility for [illegible])

[illegible]

0730 Arrived at Valley Park Middle School (Pupil Appraisal Center)
0740 Met with Linda Boyd
made walk-thru of three wings where particle board is used in construction of room partitions (was requested to monitor fiber board for presence of formaldehyde)
Did not smell any obvious odors

Met one lady who complained of frequent headaches burning eyes on occasion and some low grade fever. Also stated that air conditioning did not work all the time and there were occasions when temp got into 90°.

Bldg is closed in - very few windows in Bldg

Was introduced to janitor in case we needed to open any doors, rooms etc.

Made decision to monitor room # 104 where some complaints were made and room # 100 where children are tested.

0850 Setting up monitoring equipment for testing (Formaldehyde in air) using NIOSH Method # 3500

6-16-85

0855 Began monitoring in Room 100 in the NE Corner of room in testing room (west side) (Small room ± 9'x8') One window - one Door)

0857 Began monitoring in Room 104 - placed monitor at approximate center of room on table top.

Checking pumps and filling out paperwork

0920 Noticed a slightly stale air smell in room 104 (two smokers work in this office area) Pumps are functioning well - No problem.

0945 Paperwork.

1000 Employed Drager pump in Room 104 to determine if I could detect any formaldehyde levels - Did not get a positive indication. (<.2 PPm)

1030 Used Drager tube in the Room 100 - NE Testing room on west side. Same Negative results.

1100 The building has very few windows and poor Circulation of air Could be a problem. Old Carpeting on floor in rooms. Worker has already stated that air conditioning equipment did not function properly all the time.

11:34 Picked up Impinger monitor in Room 100.

11:45 Picked up Impinger monitor in Room 104.

12:20 Placed Impinger samples in sample bottles, packed in ice to transport to the Lab.

12:35 Leaving jobsite.

INDUSTRIAL HYGIENE DATA SUMMARY

SAMPLES COLLECTED BY [illegible]

SS# [illegible]

CLIENT [illegible] School Board JOBSITE [illegible] Middle School
Pupil Appraisal Center

SAMPLE NUMBER	LOCATION	TIME ON	TIME OFF	TOTAL TIME	FLOW RATE	TOTAL VOLUME
D VP0616 B1	Room 100 NORTHEAST	0855	1145	170	.588	100l
	CORNER OF ROOM - NE MOST TESTING ROOM					
D VP0616B2	Room 104 ≈ CENTER	0857	1134	157	.636	100l
	OF Room OFFICE AREA					

CHAIN OF CUSTODY AND SAMPLE TRANSMITTAL FORM

ANALYSIS REQUESTED: 1. [illegible] 2. ______

IS THIS FOR QUALITY CONTROL? YES NO

~~SHIFT TIME:~~ 0730 16

SUBMITTED BY: [illegible] DATE: 6-16-88
435-66-0962

CLIENT/JOBSITE: [illegible] School Board / [illegible] Middle School / Pupil Appraisal Center

TURNAROUND TIME NEEDED: ____ 12 HR ____ 24 HR ____ 72 HR

____ 5 DAY ____ 10 DAY ____ 15 DAY

REPORT TO BE GIVEN TO: Frank [illegible]

RESULTS CALLED IN TO: [illegible] / [illegible]

PHONE: 291-6963

SAMPLE NUMBER	LOCATION	TOTAL VOLUME	SAMPLE TIME	EXPOSURE TIME	INITIALS	DATE REC'D
D VPC61688	Room # 100 NE CORNER	100 l	170	—		
B1	OF Room					
	IN NE most TESTING Room					
D VPC61688	Room # 104 APPROXIMATE	100 l	157	—		
B2	CENTER					
	OF Room - SEVERAL PARTITIONS IN Room					

ANALYSIS COMPLETED: ______ (INITIAL/DATE)

REPORT COMPLETED: ______ (INITIAL/DATE)

ARCH CONSULTING SERVICES, INC.**4425 FLOYNELL DR.** B.R., LA.

DI H_2O and Sodium Bisulfite Blanks included

DAILY LOG/ACTIVITY REPORT

JOB NAME/NUMBER Valley Park Middle School Pupil Appraisal Center CLIENT EBR School Board

DATE 6-12-86 DAY # ____ TECH ARRIVAL TIME 0730 ~~CREW~~ TIME 0735

WEATHER n/a TECH DEPARTED 1230 ~~CREW~~ STOP 1600

SUPERINTENDENT N/A CIH Aileen Gaither

FOREMAN N/A IHT Connie Kennedy

DESCRIPTION OF WORK Background monitoring for formaldehyde in air at Room 108 (pupil testing) and Rm 104 (office area)

SAMPLING CONDUCTED TYPE Background NUMBER 2

TYPE ____ NUMBER ____

ANALYSED AT ARCH? Y (N) SENT TO OTHER LAB? (Y) N ____

CIH INSPECTION MADE? Y (N) ITEMS TO BE CORRECTED ____

ITEMS DISCUSSED WITH CIH ~~BY PHONE~~ Problem sources

UNUSUAL CONDITIONS OR PROBLEMS ____

PERSONAL PROTECTIVE EQUIPMENT UTILIZED n/a

RESPIRATOR n/a

OTHER PPE ____

NOTES ____

SIGNATURE Connie Kennedy

ARCH CONSULTING SERVICES, INC. **4425 FLOYNELL DRIVE**
BATON ROUGE, LOUISIANA 70809

ARCH CONSULTING SERVICES, INC. **4425 FLOYNELL DR.** B.R.,LA

AIR SAMPLING FIELD DATA SHEET

SURVEY DATE 06-16-88

SAMPLER [illegible] SS# 435-60-0462

CLIENT EBR School Board JOBSITE [illegible] Middle School

TYPE OF SAMPLING: AREA PERSONAL [illegible]

BLDG/AREA/EMPLOYEE NAME [illegible] Middle School (Pupil [illegible] Center)

FLOOR/SUBSECTION/EE SS# Room # 104

DESCRIPTION OF EXACT LOCATION OF MONITORING EQUIPMENT

Monitor located at approximate Center of room [illegible] partitions

TYPE AND LOCATION OF WORK WITH RESPECT TO MONITORING

General "Desk Work" in various partitioned cubicles

GENERAL ACTIVITIES

—

ENVIRONMENTAL CONDITIONS

N/A - Hot & Humid day

PHOTOGRAPHS TAKEN YES NO PHOTO NUMBERS —

LOCATION					
MEDIA	[illegible]				
NUMBER	18845				
pre cal date	6-15-88				
pre cal flow	.636 l/m				
ball reading	.6				
location	Rack				
post cal date	6-16-88				
post cal flow	—				
ball reading	.6				
location	[illegible]				
METHOD	[illegible]				
ID#	DVPC616B2				
ON	0857				
OFF	1134				
TOTAL TIME	157				
FLOWRATE	.636				
TOTAL VOLUME	100 l				

FOR QUALITY CONTROL Y/N Y/N Y/N Y/N

CUSTODY RETAINED Y/N Y/N Y/N Y/N

ASSUMED BY [illegible]

DATE 6-16-88

DOES THIS REQUIRE SPECIAL ACTION BY CIH OR COMPANY? YES NO

SIGNATURE [illegible]

SPECIAL NOTE BY SAMPLER

TOTAL SHIFT TIME N/A TOTAL EXPOSURE TIME

TOTAL MONITORING TIME N/A

ARCH CONSULTING SERVICES, INC. **4425 FLOYNELL DR.** B.R.,LA

AIR SAMPLING FIELD DATA SHEET

SURVEY DATE 6-16-88
SAMPLER Dennis Kennedy SS# 435-60-0002

CLIENT EBR School Board JOBSITE Valley Park Middle School

TYPE OF SAMPLING: AREA PERSONAL (background)
BLDG/AREA/EMPLOYEE NAME Valley Park Middle School (Pupil Appraisal Center)
FLOOR/SUBSECTION/EE SS# Room #106
DESCRIPTION OF EXACT LOCATION OF MONITORING EQUIPMENT
~~Middle of Table Top~~ Northeast Corner of room in NE most testing room
TYPE AND LOCATION OF WORK WITH RESPECT TO MONITORING
NO Activity in room during monitoring period
GENERAL ACTIVITIES

ENVIRONMENTAL CONDITIONS
Hot & Humid day
PHOTOGRAPHS TAKEN YES (NO) PHOTO NUMBERS —

LOCATION					
MEDIA					
NUMBER	11168				
pre cal date	6-15-88				
pre cal flow	.5884				
ball reading	.6				
location	Arch				
post cal date	6-16-88				
post cal flow	—				
ball reading	.6				
location	Arch				
METHOD	Calibrator				
ID#	DVP0616B1				
ON	0555				
OFF	1145				
TOTAL TIME	170				
FLOWRATE	.588				
TOTAL VOLUME	100 l				

FOR QUALITY CONTROL Y/(N) Y/N Y/N Y/N
CUSTODY RETAINED Y/(N) Y/N Y/N Y/N
ASSUMED BY West Pierce
DATE 6-16-88
DOES THIS REQUIRE SPECIAL ACTION BY CIH OR COMPANY? YES (NO)

SIGNATURE Dennis Kennedy

SPECIAL NOTE BY SAMPLER

TOTAL SHIFT TIME N/A TOTAL EXPOSURE TIME
TOTAL MONITORING TIME /

REFERENCE NO.

11

ARCH CONSULTING CO., INC.

5615 CORPORATE BLVD., SUITE 6 C

BATON ROUGE, LOUISIANA 70808

May 15, 1989

Mr. Frank Scimeca
East Baton Rouge Parish School Board
2875 Michelli Drive
Baton Rouge, LA 70805

RE: Formaldehyde, carbon dioxide, carbon monoxide and methane monitoring at the Valley Park Student Appraisal Center.

Dear Frank:

In response to your request, six visits were made to the Valley Park Student Appraisal Center to investigate air quality in the building. The facility was monitored for formaldehyde, carbon dioxide, carbon monoxide and methane.

During the initial visit it was decided to monitor the air for formaldehyde vapors in room 100 and 104. This decision was made because of worker complaints and because of the many particle board partitions. (Particle board is frequently a suspected source of formaldehyde). The subsequent formaldehyde monitoring was conducted by utilizing midget impingers and direct reading of Drager indicator tubes.

Carbon dioxide and carbon monoxide monitoring was conducted during the next three walk through surveys of the site. The site locations monitored included rooms 100 and 104, boiler room, smokers lounge, custodians office, commons area, adult education center and the rooftop next to the access ladder. All monitoring was conducted with direct reading of Drager indicator tubes.

1 ppm sensitivity

A seperate site visit was made to investigate clay floor tile buckling up in the old cafeteria kitchen area.

A survey was made to determine if methane gas was present in the plumbing drain lines left in place after the old cafeteria kitchen area was converted into an office area.

It should be noted that during the walk through surveys, several employees were interviewed about air quality and health complaints. The area was also checked for the presence of organic solvents such as paint thinner and degreaser. None were found on the site and the custodian reported that only small amounts were used infrequently and that no solvents were left at the facility.

Recommendations that were made and complied with include setting up a designated smokers area, developing a regular inspection and maintenance program for the central air unit, including a regular filter changing program and the plugging off of the plumbing drain lines in the old cafeteria kitchen area.

The monitoring results do not indicate any obvious problems in the building as all results are well below established guidelines. However, one operation that might be considered is biological monitoring for bacteria in the ventilation system.

Formaldehyde	Impinger	Drager Tube	TLV's
Room 100 Northeast testing room	<0.10 ppm	None Detected	1 ppm
Room 104 Approx. center of room	<0.10 ppm	None Detected	1 ppm

Carbon Monoxide	Drager Tube		
Room 100 NE testing room	None detected	2 samples	50 ppm
Room 104 Approx. center of room	None detected	2 samples	50 ppm
Commons area	None detected	2 samples	50 ppm
Boiler Room	None detected	1 sample	50 ppm
Custodians office	None detected	1 sample	50 ppm
Smoker's Lounge	1 & 3 ppm	2 samples	50 ppm

Carbon Dioxide	Drager Tube		
Room 100 NE testing room	800 ppm	2 samples	5000 ppm
Room 104 Approx. center of room	1000 ppm	2 samples	5000 ppm
Commons room	800-1000 ppm	2 samples	5000 ppm
Smokers lounge	1000 ppm	1 sample	5000 ppm
Custodian office	1000 ppm	1 sample	5000 ppm
Adult education center	800 ppm	1 sample	5000 ppm
On rooftop next to stairway	1000 ppm	1 sample	5000 ppm

Methane	Drager Tubs
Old cafeteria kitchen area	
Four plumbing chains	None detected (This was not a quantitative test. It was simply to determine the presence of methane) Test indicates that no methane was present.

REFERENCE NO.

12

WEST-PAINE Laboratories INC.
7979 GSRI AVE. • BATON ROUGE, LA 70808

RECEIVED
SEP 10 1991
LA. DEPT. OF
ENVIRONMENTAL QUALITY
IAS DIVISION
LOG # 9-10-91-53

SAMPLE ANALYSES

for

East B.R. Parish School Board
2875 Michelle Drive
Post Office Box 2950
Baton Rouge, Louisiana 70821

ATTENTION: Mr. Frank Scimeca

for

Valley Park Learning Center
4510 Baywell Street

May 15, 1990

lab

90-4158

WEST-PAINE
Laboratories INC.
7979 GSRI AVE. • BATON ROUGE, LA 70820

East B.R. Parish School Board
Baton Rouge, LA 70821
May 15, 1990

Sample receipt at West-Paine Laboratories, Inc. is documented for your designated sample(s). Chain-of-custody documentation, if provided, is included in this report. Sample analysis was in accordance with Environmental Protection Agency protocol.

A. Standard Methods for the Examination of Water and Wastewater, 16th Ed, 1985

Parameter	Method
Fluoride	413B
Nitrate	418C

B. Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, 1979

Parameter	Method
Arsenic	206.2
Barium	208.1
Cadmium	213.2
Chromium	218.2
Lead	239.2
Mercury	245.1
Selenium	270.2
Silver	272.1

C. Standard Methods for the Examination of Water and Wastewater, 16th Ed, 1985

Parameter	Method
Drinking Water Pest/Herb	509A&B
Radiologicals	703,705,706

hal

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WEST-PAINE
Laboratories INC.
7979 GSRI AVE. • BATON ROUGE, LA 70808

Baton Rouge Water Works Company
Baton Rouge, LA 70896
May 15, 1990

D. Method 524.1 Volatile Organic Compounds in Water by Purge and Trap Gas Chromatography/Mass Spectrometry (Revised 1985)

Documented results are shown on the following page(s).

Victor J. Blanchard, III
General Manager

ddl 90-4158

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Laboratories INC.
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East B.R. Parish School Board
Baton Rouge, LA 70821
May 15, 1990

D. Methods for Organic Chemical Analysis of Municipal & Industrial Wastewater, EPA-600/4-82-057, July 1982

Parameter	Method
Trihalomethanes	601
Volatile Organic Fraction	601, 602

Documented results are shown on the following page(s).

Victor J. Blanchard III
General Manager

hal

90-4158

WEST·PAINE Laboratories INC.
7979 GSRI AVE. • BATON ROUGE, LA 70820

East B.R. Parish School Board
Baton Rouge, LA 70821
May 15, 1990

Sample Source: COOLER BY ROOM 123
Date Collected: 90/03/30 Time Collected: 09:30
Date Received: 90/03/30 Time Received: 11:43

Parameter (Unit)	Result	Percent Recovery	Quality Assurance Actual/Found	Date/Time Analyst
Nitrate (mg/L N)	< 0.05	N/A	0.50/0.50	90/03/30 21:00 KJD
Fluoride (mg/L F)	0.23	N/A	0.50/0.49	90/04/03 11:00 CAE
Arsenic (mg/L As)	< 0.01	N/A	0.025/0.026	90/05/04 10:30 SGK
Barium (mg/L Ba)	< 0.1	N/A	2.50/2.40	05/04/90 10:00 SJV
Cadmium (mg/L Cd)	< 0.005	N/A	0.0010/0.0014	90/05/09 15:00 SGK
Chromium (mg/L Cr)	< 0.01	N/A	0.010/0.011	90/05/02 09:30 SGK
Lead (mg/L Pb)	< 0.005	N/A	0.025/0.025	90/05/01 13:00 SGK
Mercury (mg/L Hg)	< 0.0002	N/A	0.0100/0.0101	90/04/30 22:00 EJL
Selenium (mg/L Se)	0.01	N/A	0.025/0.026	90/05/02 12:30 SGK

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East B.R. Parish School Board
Baton Rouge, LA 70821
May 15, 1990

Sample Source: COOLER BY ROOM 123
Date Collected: 90/03/30 Time Collected: 09:30
Date Received: 90/03/30 Time Received: 11:43

Parameter (Unit)	Result	Percent Recovery	Quality Assurance Actual/Found	Date/Time Analyst
Silver (mg/L Ag)	< 0.01	N/A	0.50/0.50	90/04/30 21:00 EJL

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90-4158

WEST·PAINE Laboratories INC.
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East B.R. Parish School Board
Baton Rouge, LA 70821
May 15, 1990

Sample Source: SINK ROOM 123
Date Collected: 90/03/30 Time Collected: 09:30
Date Received: 90/03/30 Time Received: 11:43

Parameter (Unit)	Result	Percent Recovery	Quality Assurance Actual/Found	Date/Time Analyst
Nitrate (mg/L N)	< 0.05	N/A	0.50/0.50	90/03/30 21:00 KJD
Fluoride (mg/L F)	0.23	N/A	0.50/0.49	90/04/03 11:00 CAE
Arsenic (mg/L As)	< 0.01	N/A	0.025/0.026	90/05/04 10:30 SGK
Barium (mg/L Ba)	< 0.1	N/A	2.50/2.40	05/04/90 10:00 SJV
Cadmium (mg/L Cd)	< 0.005	N/A	0.0010/0.0014	90/05/09 15:00 SGK
Chromium (mg/L Cr)	< 0.01	N/A	0.010/0.011	90/05/02 09:30 SGK
Lead (mg/L Pb)	< 0.005	N/A	0.025/0.025	90/05/01 13:00 SGK
Mercury (mg/L Hg)	< 0.0002	N/A	0.0100/0.0101	90/04/30 22:00 EJL
Selenium (mg/L Se)	< 0.01	N/A	0.025/0.026	90/05/02 12:30 SGK

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90-4158

WEST-PAINE Laboratories INC.
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East B.R. Parish School Board
Baton Rouge, LA 70821
May 15, 1990

Sample Source: SINK ROOM 123
Date Collected: 90/03/30 Time Collected: 09:30
Date Received: 90/03/30 Time Received: 11:43

Parameter (Unit)	Result	Percent Recovery	Quality Assurance Actual/Found	Date/Time Analyst
Silver (mg/L Ag)	< 0.01	N/A	0.50/0.50	90/04/30 21:00 EJL

hal

90-4158

WEST-PAINE Laboratories INC.
7979 GSRI AVE. • BATON ROUGE, LA 70820

East B.R. Parish School Board
Baton Rouge, LA 70821
SAMPLE# 900330-0044

DRINKING WATER
Volatile Organic Fraction   All results in milligrams per liter

SAMPLE SOURCE: COOLER BY ROOM 123
Sample Date: 90/03/30 Sample Time: 09:30

Parameter	Result	Required Detection Limit
Bromobenzene	< 0.005	0.005
Bromodichloromethane	< 0.005	0.005
Bromoform	< 0.005	0.005
Bromomethane	< 0.005	0.005
Chlorobenzene	< 0.005	0.005
Chlorodibromomethane	< 0.005	0.005
Chloroethane	< 0.005	0.005
Chloroform	< 0.005	0.005
Chloromethane	< 0.005	0.005
o-Chlorotoluene	< 0.005	0.005
p-Chlorotoluene	< 0.005	0.005
Dibromomethane	< 0.005	0.005
m-Dichlorobenzene	< 0.005	0.005
o-Dichlorobenzene	< 0.005	0.005
trans-1,2-Dichloroethylene	< 0.005	0.005
Dichloromethane	< 0.005	0.005
1,1-Dichloroethane	< 0.005	0.005
1,1-Dichloropropane	< 0.005	0.005
1,3-Dichloropropane	< 0.005	0.005
1,3-Dichloropropene	< 0.005	0.005
2,2-Dichloropropane	< 0.005	0.005
Ethylbenzene	< 0.005	0.005
Styrene	< 0.005	0.005
1,1,2-Trichloroethane	< 0.005	0.005
1,1,1,2-Tetrachloroethane	< 0.005	0.005
1,1,2,2-Tetrachloroethane	< 0.005	0.005
Tetrachloroethylene	< 0.005	0.005
1,2,3-Trichloropropane	< 0.005	0.005
Toluene	< 0.005	0.005
p-Xylene	< 0.005	0.005
o-Xylene	< 0.005	0.005
m-Xylene	< 0.005	0.005

Date of Analysis: 90/04/11   Analyst: JED

ddl   90-4158

WEST·PAINE
Laboratories INC.
7979 GSRI AVE. • BATON ROUGE, LA 70820

East B.R. Parish School Board
Baton Rouge, LA 70821
SAMPLE# 900330-0044

DRINKING WATER
Volatile Organic Fraction All results in milligrams per liter

SAMPLE SOURCE: COOLER BY ROOM 123
Sample Date: 90/03/30 Sample Time: 09:30

Parameter	Result	Required Detection Limit
TTHM (Total Trihalomethanes)	< 0.005	0.10
Trichloroethylene	< 0.005	0.005
Carbon tetrachloride	< 0.005	0.005
1,2-Dichloroethane	< 0.005	0.005
Vinyl Chloride	< 0.002	0.002
Benzene	< 0.005	0.005
1,1-Dichloroethylene	< 0.005	0.007
1,1,1-Trichloroethane	< 0.005	0.20
1,4-Dichlorobenzene	< 0.005	0.075

Date of Analysis: 90/04/11 Analyst: JED

ddl 90-4158

WEST·PAINE
Laboratories INC.
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East B.R. Parish School Board
Baton Rouge, LA 70821
SAMPLE #: 900330-0044

PRIORITY POLLUTANTS
Drinking Water Pest/Herb

All results in milligrams per liter

SAMPLE SOURCE: COOLER BY ROOM 123
Sample Date: 90/03/30 Sample Time: 09:30

Parameter	Result	Detection Limit
Endrin	< 0.0002	0.0002
Lindane	< 0.004	0.004
Methoxychlor	< 0.100	0.100
Toxaphene	< 0.005	0.005
2,4-D	< 0.100	0.100
2,4,5-TP Silvex	< 0.010	0.010

Date of Analysis: 90/04/23 Analyst: DDM

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East B.R. Parish School Board
Baton Rouge, LA 70821
SAMPLE #: 900330-0044

Radiologicals — All results in (pCi/L)

SAMPLE SOURCE: COOLER BY ROOM 123
Sample Date: 90/03/30 Sample Time: 09:30

Parameter	Results
Gross Alpha	<0.10
Gross Beta	<0.10
Radium (226)	<0.10
Radium (228)	<0.10
Total Radium	<0.10

Date of Analysis: 90/04/07 Analyst: KPI

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East B.R. Parish School Board
Baton Rouge, LA 70821
SAMPLE# 900330-0045

DRINKING WATER
Volatile Organic Fraction   All results in milligrams per liter

SAMPLE SOURCE: SINK ROOM 123
Sample Date: 90/03/30 Sample Time: 09:30

Parameter	Result	Required Detection Limit
Bromobenzene	< 0.005	0.005
Bromodichloromethane	< 0.005	0.005
Bromoform	< 0.005	0.005
Bromomethane	< 0.005	0.005
Chlorobenzene	< 0.005	0.005
Chlorodibromomethane	< 0.005	0.005
Chloroethane	< 0.005	0.005
Chloroform	< 0.005	0.005
Chloromethane	< 0.005	0.005
o-Chlorotoluene	< 0.005	0.005
p-Chlorotoluene	< 0.005	0.005
Dibromomethane	< 0.005	0.005
m-Dichlorobenzene	< 0.005	0.005
o-Dichlorobenzene	< 0.005	0.005
trans-1,2-Dichloroethylene	< 0.005	0.005
Dichloromethane	< 0.005	0.005
1,1-Dichloroethane	< 0.005	0.005
1,1-Dichloropropane	< 0.005	0.005
1,3-Dichloropropane	< 0.005	0.005
1,3-Dichloropropene	< 0.005	0.005
2,2-Dichloropropane	< 0.005	0.005
Ethylbenzene	< 0.005	0.005
Styrene	< 0.005	0.005
1,1,2-Trichloroethane	< 0.005	0.005
1,1,1,2-Tetrachloroethane	< 0.005	0.005
1,1,2,2-Tetrachloroethane	< 0.005	0.005
Tetrachloroethylene	< 0.005	0.005
1,2,3-Trichloropropane	< 0.005	0.005
Toluene	< 0.005	0.005
p-Xylene	< 0.005	0.005
o-Xylene	< 0.005	0.005
m-Xylene	< 0.005	0.005

Date of Analysis: 90/04/11   Analyst: JED

ddl   90-4158

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East B.R. Parish School Board
Baton Rouge, LA 70821
SAMPLE# 900330-0045

DRINKING WATER
Volatile Organic Fraction All results in milligrams per liter

SAMPLE SOURCE: SINK ROOM 123
Sample Date: 90/03/30 Sample Time: 09:30

Parameter	Result	Required Detection Limit
TTHM (Total Trihalomethanes)	< 0.005	0.10
Trichloroethylene	< 0.005	0.005
Carbon tetrachloride	< 0.005	0.005
1,2-Dichloroethane	< 0.005	0.005
Vinyl Chloride	< 0.002	0.002
Benzene	< 0.005	0.005
1,1-Dichloroethylene	< 0.005	0.007
1,1,1-Trichloroethane	< 0.005	0.20
1,4-Dichlorobenzene	< 0.005	0.075

Date of Analysis: 90/04/11 Analyst: JED

ddl

90-4158

WEST-PAINE Laboratories INC.
7979 GSRI AVE. • BATON ROUGE, LA 70820

East B.R. Parish School Board
Baton Rouge, LA 70821
SAMPLE #: 900330-0045

PRIORITY POLLUTANTS
Drinking Water Pest/Herb

All results in milligrams per liter

SAMPLE SOURCE: SINK ROOM 123
Sample Date: 90/03/30 Sample Time: 09:30

Parameter	Result	Detection Limit
Endrin	< 0.0002	0.0002
Lindane	< 0.004	0.004
Methoxychlor	< 0.100	0.100
Toxaphene	< 0.005	0.005
2,4-D	< 0.100	0.100
2,4,5-TP Silvex	< 0.010	0.010

Date of Analysis: 90/04/23 Analyst: DDM

hal

90-4158

WEST-PAINE
Laboratories INC.
7979 GSRI AVE. • BATON ROUGE, LA 70820

East B.R. Parish School Board
Baton Rouge, LA 70821
SAMPLE #: 900330-0045

Radiologicals — All results in (pCi/L)

SAMPLE SOURCE: SINK ROOM 123
Sample Date: 90/03/30 Sample Time: 09:30

Parameter	Results
Gross Alpha	0.84 ± 2.41
Gross Beta	1.95 ± 2.59
Radium (226)	<0.10
Radium (228)	0.18 ± 0.16
Total Radium	0.18 ± 0.16

Date of Analysis: 90/04/07 Analyst: KPI

nal

90-4158

WEST·PAINE
Laboratories INC.
7979 GSRI AVE. • BATON ROUGE, LA 70820

PRIORITY POLLUTANTS
VOLATILES FRACTION - QUALITY CONTROL RESULTS

	West-Paine Matrix* Spike Results % Recovery	QC Acceptance Criteria % Recovery
Benzene	62	37-151
Bromoform	140	45-169
Carbon tetrachloride	88	70-140
Chlorobenzene	93	37-160
Chlorodibromomethane	115	53-149
Chloroethane	---	14-230
2-Chloroethylvinyl ether	---	D-305
Chloroform	89	51-138
1,2-Dichlorobenzene	---	18-190
1,4-Dichlorobenzene	---	18-190
1,3-Dichlorobenzene	---	59-156
Dichlorobromomethane	113	35-155
1,1-Dichloroethane	63	59-155
1,2-Dichloroethane	124	49-155
1,1-Dichloroethene	104	D-234
trans-1,2-Dichloroethene	91	54-156
1,2-Dichloropropane	111	D-210
cis-1,3-Dichloropropene	57	D-227
trans-1,3-Dichloropropene	60	17-183
Ethylbenzene	73	37-162
Methylbromide	---	D-242
Methylchloride	---	D-273
Methylene chloride	154	D-221
1,1,2,2-Tetrachloroethane	124	46-157
Tetrachloroethene	100	64-148
Toluene	66	47-150
1,1,1-Tichloroethane	76	52-162
1,1,2-Trichloroethane	118	52-150
Trichloroethene	115	71-157
Trichlorofluoromethane	58	17-181
Vinyl Chloride	---	D-251
Total Xylene (semiquantitative)	---	N/A
Styrene	---	N/A
Date of Analyses	04-12-90	

Spike Concentration 20 ug/L

* Environmental Protection Agency Quality Control Protocol for this method requires a specified percentage of matrix spike analyses, the results of which must meet QC Acceptance Criteria. The data above represent the results obtained on a sample matrix (not necessarily your sample). For comparison purposes the QC Acceptance Criteria data are also shown.

D = Detected, result must be greater than zero.

WEST-PAINE Laboratories INC.
7979 GSRI AVE. • BATON ROUGE, LA 70808

WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

FRACTION	COMPOUND	CONC. SPIKE (ug/L)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
PEST	Lindane	2.0	<1.0	2.20	110				50	46-127
	Heptachlor	2.0	<1.0	2.06	103				31	35-130
	Aldrin	2.0	<1.0	2.03	102				43	34-132
	Dieldrin	2.0	<1.0	2.26	113				38	31-134
	Endrin	2.0	<1.0	2.21	110				45	42-139
	4,4'-DDT	2.0	<1.0	2.37	118				50	23-134
HERB	2,4-D									
	2,4,5-TP									
	2,4,5-T									
PEST	Methoxychlor	10.0	<1.0	11.4	114					
	Chlordane									
	Toxaphene									
PCB	Aroclor 1254									
TCDD	2,3,7,8-TCDD									

Date/Analyst: 11-30-89 JTL/DMM

ADVISORY LIMITS

RPD: PEST______ out of ______: outside QC limits   RECOVERY: PEST 0 out of 6 : outside QC limits

SAMPLE IDENTIFICATION: 891102-0020   MS REFERENCE NUMBER: SPCWC-099

*Contract Laboratory Protocol
These limits are for advisory purposes only. They are not to be used to determine if a sample should be reanalyzed. When sufficient multi-lab data are available, standard limits will be calculated.

WEST-PAINE Laboratories INC.
7979 GSRI AVE. • BATON ROUGE, LA 70808

WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

FRACTION	COMPOUND	CONC. SPIKE (ug/L)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
PEST	Lindane								50	46-127
	Heptachlor								31	35-130
	Aldrin								43	34-132
	Dieldrin								38	31-134
	Endrin								45	42-139
	4,4'-DDT								50	23-134
HERB	2,4-D									
	2,4,5-TP									
	2,4,5-T									
PEST	Methoxychlor									
	Chlordane									
	Toxaphene	50	<1.0	55	110					
PCB	Aroclor 1254									
TCDD	2,3,7,8-TCDD									

Date/Analyst: 12-08-89 LSM/DDM

ADVISORY LIMITS

RPD: PEST_______out of_____: outside QC limits RECOVERY: PEST_______out of_____: outside QC limits

SAMPLE IDENTIFICATION: 890928-0118 MS REFERENCE NUMBER: TOXWC-049

*Contract Laboratory Protocol
These limits are for advisory purposes only. They are not to be used to determine if a sample should be reanalyzed. When sufficient multi-lab data are available, standard limits will be calculated.

WEST·PAINE Laboratories INC.
7979 GSRI AVE. • BATON ROUGE, LA 70808

WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

FRACTION	COMPOUND	CONC. SPIKE (ug/L)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
PEST	Lindane								50	46-127
	Heptachlor								31	35-130
	Aldrin								43	34-132
	Dieldrin								38	31-134
	Endrin								45	42-139
	4,4'-DDT								50	23-134
HERB	2,4-D	4.0	<1.0	2.75	69					
	2,4,5-TP	2.0	<1.0	1.54	77					
	2,4,5-T	2.0	<1.0	1.37	68					
PEST	Methoxychlor									
	Chlordane									
	Toxaphene									
PCB	Aroclor 1254									
TCDD	2,3,7,8-TCDD									

Date/Analyst: 12-12-89 DDM/DMM

ADVISORY LIMITS

RPD: PEST_______out of______: outside QC limits RECOVERY: PEST_______out of_____: outside QC limits

SAMPLE IDENTIFICATION: 890928-0118 MS REFERENCE NUMBER: HRBWC-071

*Contract Laboratory Protocol
These limits are for advisory purposes only. They are not to be used to determine if a sample should be reanalyzed. When sufficient multi-lab data are available, standard limits will be calculated.

WEST-PAINE
Laboratories INC.
7979 GSRI AVE. • BATON ROUGE, LA 70820

#84

CHAIN-OF-CUSTODY RECORD

SAMPLE COLLECTION:

Location of Sampling: VALLEY PARK CENTER

Facility Type: ___Producer ___Hauler ___Disposal Site ___Other E.B.R. School

Collector's Name: Dennis McGuire of D.R. Water Co. Telephone: (504) 358-3600

Company Name: E.B.R. Parish School Board: Attn: FRANK SCIMECA

Address: —

Date Sampled: 3-30-90 Time: 930

Type of Process or Facility Sampled: Potable Water School Building

Field Information: Location: Cooler By Room 123
: Sink Room 123

SAMPLE SHIPPING (other than transportation by collector):

Transporter's Name: ______ Date: ______ Time: ______

Company Name: ______

Address: ______

SAMPLE RECEIVING:

Person accepting sample Daria Haydel Date: 3-30-90 Time 1110

Company Name: West Paine Lab.

Address: ______

Sample Disposition ______Storage__Further Transportation_____Other______

CHAIN-OF-POSSESSION: (Attach additional sheets as needed to show continuity)
TERMINATION OF CHAIN-OF CUSTODY:
Authorized by: ______ Date: ______ Time ______
Company/Name: ______ Address: ______

REFERENCE NO.

13

State of Louisiana

Department of Environmental Quality

BUDDY ROEMER
Governor

January 17, 1992

PAUL TEMPLET
Secretary

M E M O R A N D U M

To: File

From: Tom Mayhall, EQSI *M*
IAS Division

Re: Valley Park School Site
Field Sampling Event

On Oct. 7 and 8 myself, Kyle Moppert, John Halk, and Tammy Guillotte conducted field sampling activities at the Valley Park School Site. Also present was Tea Sloan of Ecology and Engineering, Inc. She is an EPA/TAT team member and was tasked by the EPA to assist us with CLP labeling, packaging, and shipping criteria.

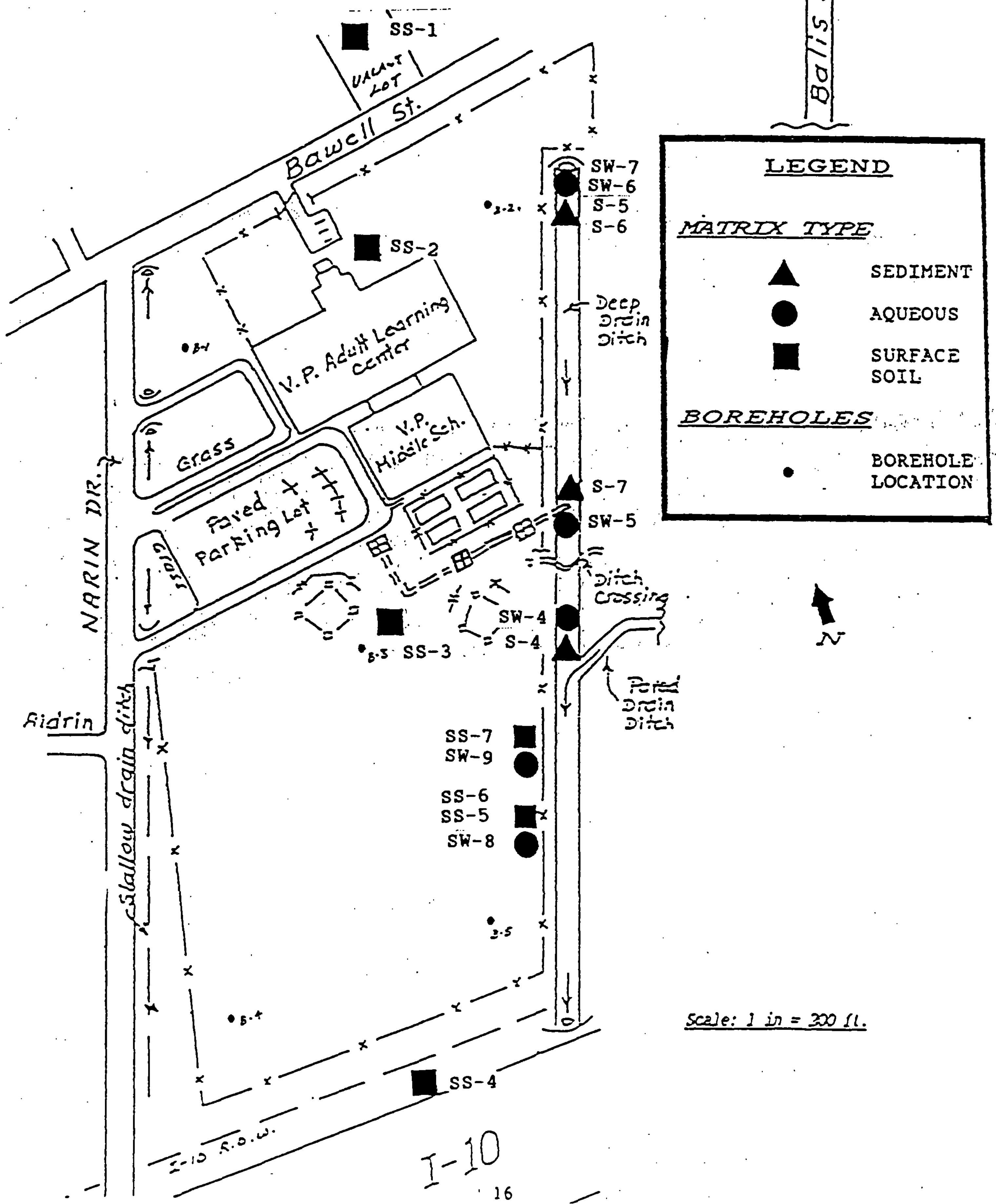
Samples collected were in accordance with the Valley Park School SSI Workplan dated 4-7-91. A total of thirty-two samples were collected for analyses. Twenty-five samples were collected Oct. 7 & 9, 1991. The remaining seven ground water samples were collected by myself, Kyle Moppert, and Tea Sloan on Oct. 9, 1991. The samples were shipped to Datachem Laboratories, Inc. and the Southwest Research Institute.
Analyses results are anticipated within the next one to three months. All samples were labeled, packaged and shipped in accordance with EPA/CLP requirements. Sample locations are identified in the attached table.

TM/ph

Attachments

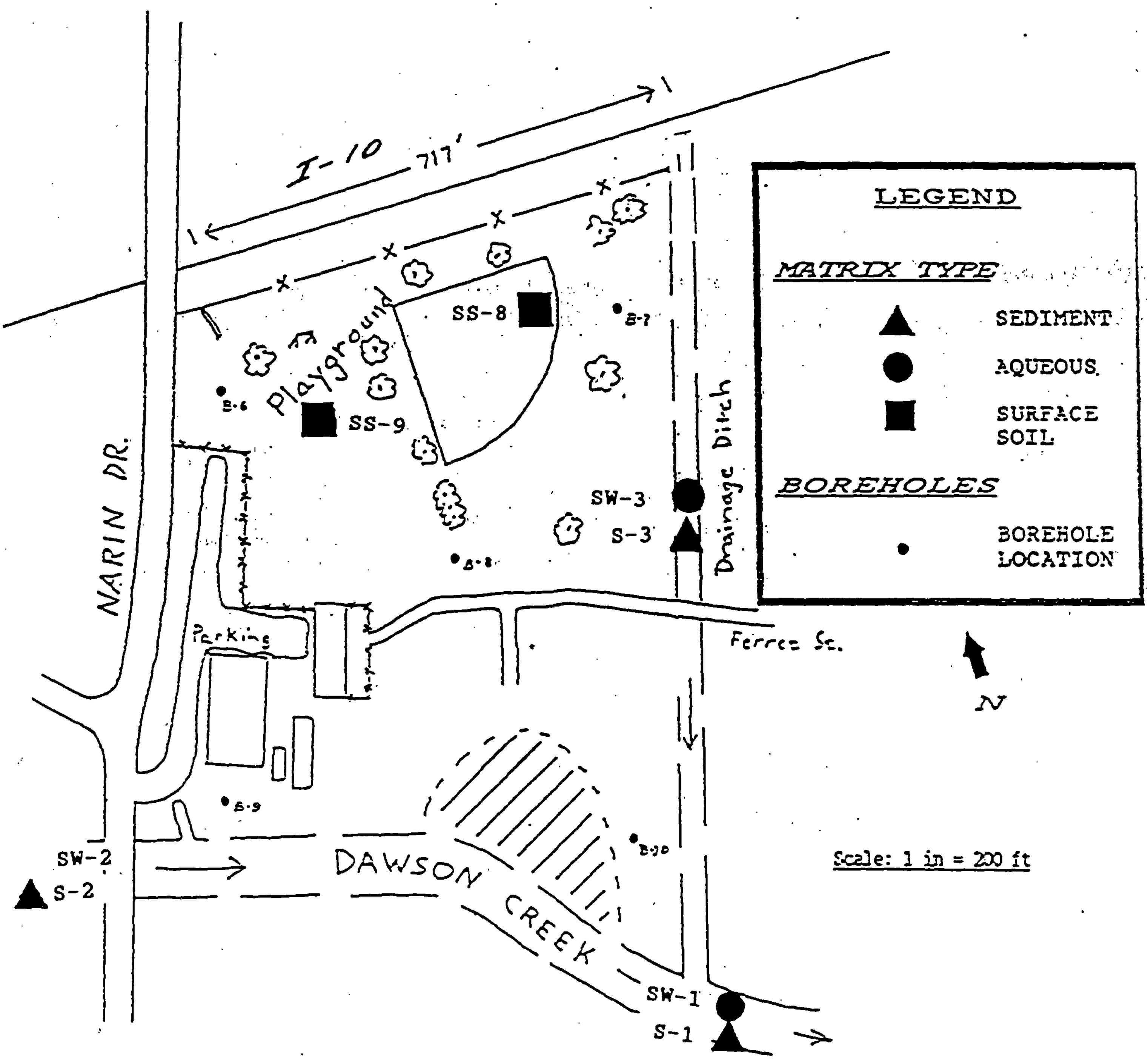
INACTIVE AND ABANDONED SITES DIVISION P.O. BOX 82282 BATON ROUGE, LOUISIANA 70884-2282

VALLEY PARK SCHOOL (SSI)
SAMPLE LOCATION PLAT 10-9-91



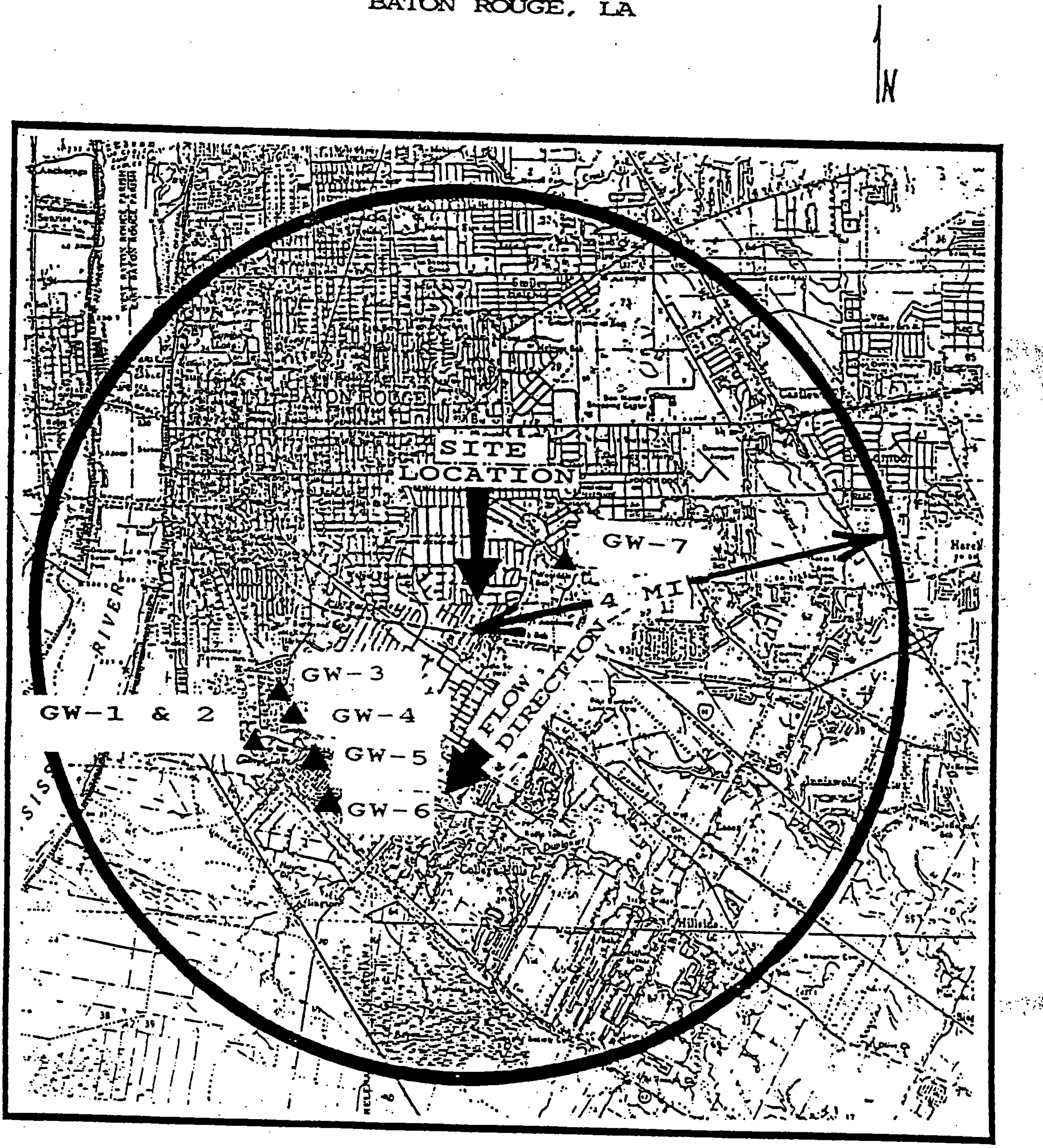
VALLEY PARK SCHOOL (SSI)

SAMPLE LOCATION PLAT 10-9-91



WATER WELL SAMPLING LOCATIONS

VALLEY PARK LANDFILL
BATON ROUGE, LA



STATION LOC.	CLP ORGANIC NO.	CLP INORGANIC NO.	VOA	BNA	PEST/PCB	METALS
SS-1	FT218	MFR618 ✓	✓	✓	✓	
SS-2	FT219	MFR619 ✓	✓	✓	✓	
SS-3	FT220	MFR620 ✓	✓	✓	✓	
SS-4	FT221	MFR621 ✓	✓	✓	✓	
SS-5	FT222	MFR622 ✓	✓	✓	✓	
SS-6	FT223	MFR623 ✓	✓	✓	✓	
SS-7	FT224	MFR624 ✓	✓	✓	✓	
SS-8	FT225	MFR625 ✓	✓	✓	✓	
SS-9	FT226	MFR626 ✓	✓	✓	✓	
SW-1	FT201	MFR601 ✓	✓	✓	✓	
SW-2	FT202	MFR602 ✓	✓	✓	✓	
SW-3	FT203	MFR603 ✓	✓	✓	✓	
SW-4	FT204 ✓	MFR604 ✓	✓	✓	✓	
SW-5	FT205 ✓	MFR605 ✓	✓	✓	✓	
SW-6	FT206 ✓	MFR606 ✓	✓	✓	✓	
SW-7	FT207 ✓	MFR607 ✓	✓	✓	✓	
SW-8	FT208 ✓	MFR608 ✓	✓	✓	✓	
SW-9	FT209 ✓	MFRSO9 ✓	✓	✓	✓	
SW-10	FT217 ✓	MFR617 ✓	✓	✓	✓	
S-1	FT210	MFR610 ✓	✓	✓	✓	
S-2	FT211	MFR611 ✓	✓	✓	✓	
S-3	FT212	MFR612 ✓	✓	✓	✓	
S-4	FT213	MFR613 ✓	✓	✓	✓	
S-5	FT214	MFR614 ✓	✓	✓	✓	
S-6	FT215	MFR615 ✓	✓	✓	✓	
S-7	FT216	[illegible] ✓	✓	✓	✓	

GW-1	FT227	MFR627 ✓	✓	✓	✓	
GW-2	FT228	MFR628 ✓	✓	✓	✓	
GW-3	FT229	MFR629 ✓	✓	✓	✓	
GW-4	FT230	MFR630 ✓	✓	✓	✓	
GW-5	FT232	MFR632 ✓	✓	✓	✓	
GW-6	FT231	MFR631 ✓	✓	✓	✓	
GW-7	FT233	MFR633 ✓	✓	✓	✓	

SAMPLE LOCATIONS

VALLEY PARK SCHOOL (ssi)

10-9-91

SAMPLE #	MATRIX	LOCATION
SS-1	SOIL	0-6" FROM A VACANT LOT BETWEEN 4581 AND 4615 BAWELL ST. 200 FT. N. OF STREET R. OF WAY
SS-2	SOIL	0-6" FROM N. SIDE OF BUILDING, 47' E. OF BUILDING, 12' S. OF SIDEWALK
SS-3	SOIL	0-6" IN LOW AREA 56' W. OF PAVED AREA IN LINE WITH CHAIN LINK FENCE AND 28' FROM CORNER OF BALL FIELD FENCE
SS-4	SOIL	0-6" FROM N. SIDE OF I-10 R. OF WAY IN 1' WIDE DRAINAGE 126' W. FROM SE FENCE CORNER AND 58' S. OF FENCE AND 8' N. OF LIGHT POLE
SS-5	SOIL	0-6" 95' N. OF I-10 CULVERT, 15' UP EMBANKMENT (SAME LOCATION AS SW-8
SS-6	SOIL	FIELD DUPLICATE OF NO. SS-5
SS-7	SOIL	0-6" 427' N. OF NO. SW-8, 10' UP EMBANKMENT (SAME LOCATION AS SW-9)
SS-8	SOIL	0-6" IN LOW AREA 100' E. OF TWO WOODEN LIGHT POLES AND 64' S. OF FENCE.
SS-9	SOIL	0-6" AT CHILDREN'S PLAYGROUND AREA 12' S. OF UTILITY POLE W/TRANSFORMER, 150' E. OF NAIRNE DR. BRIDGE.
SW-1	SURFACE WATER	CENTER OF DAWSON CREEK 50' E. OF DRAINAGE DITCH OUTFALL AND 155' W. OF BALIS ST. BRIDGE
SW-2	SURFACE WATER	CENTER OF DAWSON CREEK 100' W. OF NAIRNE ST. BRIDGE
SW-3	SURFACE WATER	CENTER OF DRAINAGE DITCH 30' N. OF FERRET ST. BRIDGE
SW-4	SURFACE WATER	CENTER OF DRAINAGE DITCH 50' N. OF PAVED DRAINAGE DITCH
SW-5	SURFACE WATER	DISCHARGE WATER FROM CORRUGATED DRAIN (SURFACE WATER DRAINAGE)

SAMPLE #	MATRIX	LOCATION
SW-6	SURFACE WATER	EXTREME N. OF DRAINAGE DITCH DIRECTLY BELOW STORM WATER OUTFALL CENTER OF DRAINAGE DITCH
SW-7	SURFACE WATER	FIELD DUPLICATE OF SW-6
SW-8	SURFACE WATER	LEACHATE FROM 15' UP EMBANKMENT, 95' N. OF I-10 CULVERT (SAME LOCATION AS SS-5
SW-9	SURFACE WATER	LEACHATE FROM 10' UP EMBANKMENT, 427' N. OF SW-8
SW-10	WATER	RINSATE FROM DECONNING SAMPLING TOOLS
S-1	SEDIMENT	CENTER OF DAWSON CREEK 50' E. OF DRAINAGE DITCH OUTFALL AND 155' W. OF BALIS ST. BRIDGE (SAME LOCATION AS SW-1)
S-2	SEDIMENT	CENTER OF DAWSON CREEK 100' W. OF NAIRNE ST. BRIDGE
S-3	SEDIMENT	CENTER OF DRAINAGE DITCH 30' N. OF FERRET ST. BRIDGE
S-4	SEDIMENT	CENTER OF DRAINAGE DITCH 50' N. OF PAVED DRAINAGE DITCH INTERSECTION
S-5	SEDIMENT	CENTER OF DRAINAGE DITCH 1' FROM STORM WATER OUTFALL DRAIN AT BAWELL ST.
S-6	SEDIMENT	FIELD DUPLICATE OF S-5
S-7	SEDIMENT	COLLECTED DIRECTLY FROM DISCHARGE FROM CORRUGATED DRAIN PIPE LOCATED NEAR BASKETBALL COURT DRAINING INTO DRAINAGE DITCH.
GW-1	GROUND WATER	LSU-FOOTBALL PRACTICE FIELD, WELL I. D. NO. 302439091103001
GW-2	GROUND WATER	FIELD DUPLICATE OF GW-1
GW-3	GROUND WATER	LSU-PUMP HOUSE AT ACADIAN DORM WELL I. D. NO. 302456091101
GW-4	GROUND WATER	LSU-ROSE GARDEN WELL NO. 302443091101
GW-5	GROUND WATER	LSU-PUMPHOUSE AT SYSTEMS BUILDING WELL I. D. NO. 302434091103001

SAMPLE #	MATRIX	LOCATION
GW-6	GROUND WATER	(b) (6) [redacted] RESIDENCE AT (b) (6) [redacted] WELL I. D. NO. 302422091094
GW-7	GROUND WATER	(b) (6) [redacted] RESIDENCE AT (b) (6) [redacted] WELL I. D. NO. 302422091094 (BACKGROUND)

SCREENING SITE INSPECTION REPORT

APPENDIX C (CONTINUED)

VALLEY PARK SCHOOL
4510 BAWELL STREET
BATON ROUGE, LOUISIANA 70808
(LAD985170273)

VOLUME 3 OF 3

Prepared by

Tom Maynall, Environmental Specialist
Additional Preparation: John Halk, Coordinator

The Louisiana Department of Environmental Quality
Inactive and Abandoned Sites Division

REFERENCE NO

14

File
V. Park
JM

State of Louisiana

Department of Environmental Quality

Edwin W. Edwards
Governor

Kai David Midboe
Secretary

February 17, 1992

Dr. Bernard J. Weiss
Superintendent
East Baton Rouge Parish School Systems
P. O. Box 2950
Baton Rouge, La. 70821

Re: Valley Park School
Indoor Air Investigative Report

Dear Dr. Weiss:

In response to reported health problems from the employees of the Valley Park Administration building, the Department of Environmental Quality (DEQ) and the Office of Public Health undertook an indoor environmental investigation of the building.

The purpose of involvement by the DEQ/IAS Division was to determine if the Valley Park landfill was a source of potential indoor air contaminants in the building. The objective of the investigation was to collect data which would define and help evaluate the indoor environment, locate potential sources of contamination, and evaluate the ventilation system for the purpose of making recommendations for corrective action.

The Inactive and Abandoned Sites Division of DEQ undertook the task of delegating responsibilities to appropriate agencies, coordinating those activities, and summarizing the recommendations. Please see the attached report. If you have any questions or comments please contact myself or Mr. Tim Knight of our staff at (504) 765-0487.

Sincerely,

Harold F. Ethridge Jr.

Mr. Harold F. Ethridge, Jr.
Administrator
Inactive and Abandoned Sites Division

HFE/TM/ph

cc: Mr. Robert Cooper (letter only)
Mr. Charles Law (letter only)

Attachments

VALLEY PARK ADMINISTRATIVE CENTER

INVESTIGATIVE REPORT

Department of Environmental Quality

Inactive and Abandoned Sites Division

Site Assessment Section

Prepared by: Thomas E. Mayhall
Environmental Specialist
February 17, 1992

TABLE OF CONTENTS

VALLEY PARK ADMINISTRATION CENTER
(Investigative Report)

I. EXECUTIVE SUMMARY

In September, 1991, sixty-one employees of the East Baton Rouge School board, occupants of the Valley Park Administration Center petitioned their complaints to the East Baton Rouge School Board for corrective action concerning reported health problems. Complaints included headaches, sinus congestion, weak or blurred vision, throat irritation, fatigue, burning eyes, dizziness, sneezing, and sinus infections , etc., Those building occupants requested an investigation be performed which would assess the indoor air environment.

The Valley Park Administration Center is located directly above a previous major city landfill, the Valley Park Landfill. At the time of the reported health problems, the Inactive and Abandoned Sites Division (IASD) of the Louisiana Department of Environmental Quality (LDEQ) was conducting a Site Screening Investigation of the previous Valley Park Landfill site. The purpose of the investigation was to determine if and what potential impacts the landfill may have on human health and/or the environment. Based on the complaints made from personnel in the building, the decision was made by the DEQ/IAS Division to extend the investigation to include the Administration Center building.

The purpose of the investigation was to collect hard data which would describe the indoor air quality and help identify potential contaminant sources. This information would provide data which would ascertain whether potentially harmful vapors were being emitted from the landfill wastes into the building; or, if conditions in the building itself were promoting an unhealthy indoor air environment, a condition known as "sick building syndrome". Both of these situations have been known to result in ill health effects similar to those described by the occupants. The investigation included principally sample collection and physical inspection of the building interior and ventilation system.

The LDEQ requested the Louisiana Office of Public Health, Section of Environmental Epidemiology (OPH/SEE) to join the IAS Division in conducting the investigation. Other pertinent information was provided from the LDEQ/Air Toxics Division and the LDEQ/Ground Water Division. This report details the investigation and includes activities undertaken, findings, and recommendations based on those findings.

II. INTRODUCTION

OBJECTIVES

The overall objectives of the investigation were to develop a strategy to most adequately assess the quality of the indoor air environment, address health concerns and identify potential contaminant sources that could possibly contribute to an unhealthy indoor air environment.

The goal of the IAS Division was to delegate responsibilities to other departments and agencies and coordinate those activities to fulfill the objectives of the investigation. Independent investigations were conducted and recommendations made by the OPH/SEE, DEQ/Air Toxics and the DEQ/Ground Water Division. The objective of this report is to summarize all pertinent activities, data collected (sampling and non-sampling) and make comprehensive recommendations.

SITE DESCRIPTION

The Valley Park Administrative Complex is located at 4510 Bawell St., Baton Rouge, La. The building comprises 70,228 sq. ft. The land area consists of twenty-three (23) acres and has one major building, one portable building, parking lots, a basketball court and two baseball fields. It is centered within a densely populated municipal area. The complex building construction began in 1966 and was completed in 1968. The building is supported by wooden pilings to a depth of fifteen feet and anchored in a pleistocene clay layer. In August, 1965, the East Baton Rouge Parish School Board acquired the site property from the East Baton Rouge Parish north of I-10. It operated as a junior high school from 1968 to 1973 and then operated as a middle school until 1986, to its present use for administration purposes and adult education.

The Valley Park Administrative Complex is situated on top of a previously closed City Landfill, the Valley Park Landfill. The Baton Rouge City-Parish began using the site as a landfill in the 1940's. It was named the Valley Park Landfill and was used as a backup to their primary landfill, the McKinley Street Landfill. The site served as the City-Parish's primary landfill from 1958 through 1963. No records were maintained as to types or quantities of materials placed at the site. Construction of Interstate (I-10), which divided the landfill, commenced in 1963 and was completed in 1965. The Valley Park Landfill site, is comprised of thirty-six (36) acres, all within the city limits of Baton Rouge, Louisiana. The site is rectangular shaped and is bounded by Bawell Street to the north; Narine Street to the west; Dawson Creek to the south; and a drainage ditch to the east. The geographic coordinates are: 30 degrees, 26' 33" N. latitude and 91°, 08 38" W longitude.

III. HISTORICAL EVENTS

The following is a chronological summary of investigative events concerning the Valley Park Complex Building and/or landfill to date.

1981-The Louisiana Department of Natural Resources (DNR), Hazardous Waste Management Division collected shallow soil, water and sediment samples from the landfill site. There were no detections of hazardous constituents from the samples, but more extensive sampling was recommended.

1982-The Louisiana State University submitted a preliminary environmental assessment of the landfill site which detailed a

sampling event which resulted in detection of zinc at 300 ppm, cadmium at 16 ppm; lead at 1120 ppm and arsenic at 53.0 ppm.

1982-Gulf South Institute prepared an investigative report for DNR. Samples collected at the Valley Park Landfill resulted in low levels of some metals only.

1986-Cox, Walker and Associates, Inc., consulting Engineers were unsuccessful in attempting to collect air samples of the indoor air environment at Valley Park School. The inspector noted he detected no odors, damaged vegetation nor chemicals.

1988-The EBRP School Board contracted Arch Consulting Services, Inc., to test the indoor air for formaldehyde from Valley Park School in rooms 100 and 104. Formaldehyde was not detected. It was determined that," the findings should not pose any significant problem for employees working in those areas."

1989-Arch Consulting Co., Inc., sampled rooms no. 100 and no. 104, testing for formaldehyde, methane, carbon dioxide and carbon monoxide. Detections reported were within safe guidelines. Biological monitoring of the building was recommended.

1989-The maintenance Division of the EBRP School Board, cleaned and re-installed all air conditioning coils in the Valley Park Complex building. Six floor drains were plugged with cement in an office area that had previously been a kitchen. These drains had not been in use for some time, therefore could potentially have allowed sewer gas to emit into the room.

1990-The EBRP School Board contracted West-Paine Laboratories to test the drinking water for metals, fluorides, nitrates, volatile organics, radiologicals and pesticides/herbicides. All detections were within acceptable levels.

1991-An employee representative at Valley Park, submitted results of health concerns to Dr. Bernard Weiss, Superintendent of EBRP Schools, September 6. The report identified numerous health complaints including neurologic, upper raspatory, ocular and dermatologic symptoms. Employee proposals included extensive ambient air sampling of the building interior and campus grounds, examination of the ventilation system, among other proposals.

1991-On April 19, a major cooling tower was installed at the complex, thus improving efficiency of the cooling system.

1991-During the first week of October, EBRP maintenance personnel open approximately six intake vents connected to the ventilation system. It is estimated the opening of the vents increased fresh air in the building by approximately 20%. The vents had reportedly been previously closed for energy conservation. The indoor air samples used in his investigation were collected after this occurrence.

IV. ACTIONS TAKEN

AGENCY RESPONSIBILITY

The IAS Division met with the staff from the OPH/SEE, DEQ/Air Toxics Division, EBRP School representatives, and employee representatives from the Valley Park Administration Complex who submitted the health concerns survey and proposal report. Decisions were made at the meeting that established the objectives of the investigation and particular agency responsibility and are as follows:

The IAS Division decided to conduct the SSI work plan which is was designed to address environmental pathway concerns in three prominent areas in and around the Valley Park Landfill; (1) potential on-site exposure; (2) potential surface water run off; and, (3) ground water contamination.

The OPH/SEE agreed to pursue a joint investigation with the IAS division. Their responsibilities primarily were to conduct their investigation as they determined appropriate and included but was not limited to; (1) conducting a screening survey of employees to determine the types and frequency of adverse health effects of the Valley Park personnel and to define areas of most frequent complaints, to make recommendations to the IAS Division for sampling locations. (2) to conduct biological sampling of the ambient indoor air and from inside the duct work of the ventilation system, testing for molds, mildew and bacteria, (3) to receive public comment and document health concerns. Data collected by OPH would be used to locate the indoor air sampling points and determine sampling times.

The DEQ/Air Toxics Division agreed to assess the heating/air system, determine any weaknesses in the system and make recommendations. They also agreed to collect indoor ambient air samples from the building and test for thirty-nine harmful chemicals. The compounds sampled for are those typically sampled for by EPA at Superfund Sites.

At a later date, the DEQ/Ground Water Division agreed to collect samples from the drinking water system and analyze for chemicals and metals (Target Compound List and Target Analyte List).

SSI Sampling

The IAS Division collected thirty-two samples from the Landfill area on October 7, 8, and 9, 1991. Samples were analyzed in accordance with EPA's Contract Lab Program. Samples were collected from surface soils, leachate, sediments and surface water. Samples were not collected from inside the Valley Park Building. Sampling was in accordance with a Screening Site Investigation (SSI) Work Plan dated April 7, 1991. The SSI is the second phase in EPA's Superfund pre-remedial ranking process. Samples were analyzed for the Target Compound List and Target Analyte List (full scan analyses). Sample results are presently not conclusive and are not included in this report. The sample results are presently undergoing data validation and data summary preparation by the IAS Division. An SSI report including the sample data results will be submitted to EPA for potential Superfund ranking and consideration. EPA will evaluate the data for health and environmental health risks.

Physical Inspections

On October 4, 1991, staff from the IAS Division, OPH/SEE, the DEQ/Air Toxics Division, EBRP maintenance and employee personnel walk through the building and note areas of concern for future investigative activities. Twelve individuals were present. The purpose was to identify areas of complaints and note other areas of concern.

On November 8, 1991, a second physical inspection was conducted by the same members. The purpose was to identify deficiencies within the ventilation system and other areas of the building and collect samples for biological testing (fungus, mold and bacteria). Two biological samples were collected, one from the air intake near room 210 the other from the hallway vent at room 118.

The East Baton Rouge Health Unit inspected the building on October 8, 1991. Four follow up visits were made that month.

Indoor Air Quality Screening Survey

On October 14, 1991, the OPH/SEE conducts an indoor Air Quality Screening Survey. A total of 170 of 270 employees were interviewed. The survey contained questions concerning building complaints, health effects, and some personnel health history. Information from this survey was used to assess the frequency and locations of reported health problems. This information was used to help determine sample collection point criteria.

Drinking Water Sampling

On November 6, 1991, staff from the EBRP Health Unit collected three samples from two drinking water fountains and the kitchen sink. These samples were tested for the presence of bacteria.

On November 7, 1991, staff from DEQ's Ground Water Division collected samples from the same outlets as above. These samples were analyzed for compounds on the Target Compound List and the Target Analyte List in DEQ's water testing laboratory.

Indoor Ambient Air Sampling

On November 18 and 20, 1991, personnel from the Air Toxics Analysis Section of DEQ screened each room in the building for total hydrocarbons using a Flame Ionization Detector Organic Vapor Monitor. A total of ten (10) samples were collected for laboratory analyses. Collection of the samples were accomplished by the use of six (6) liter canister and solid adsorbent tubes containing Tenax GR. The samples were analyzed in DEQ's Air Toxics laboratory in Baton Rouge using a gas chromatograph-mass spectrometer and were tested for total non-methane hydrocarbons, all compounds of the Target Compound List. Carbon Dioxide (CO_2) was sampled for in nine locations. On site methods were used that resulted in immediate results using a Drager Pump System and a Miran 1A Gas Analyzer (see appendix A).

On November 18, 1991, personnel from OPH/SEE collected a total of forty-one (41) samples at various locations in the building. Passive sampling was the preferred method using plates positioned in rooms in areas of maximum air circulation. The samples were tested for bacteria and fungi (see Appendix D).

IV. FINDINGS

SSI Analyses Report

Sample Analyses for the SSI were received January 3, 1991 for thirty-two (32) samples collected October 7, 8, and 9 at the previous Valley Park Landfill. The analyses reports are presently undergoing data validation, a requirement of the Contract

Laboratory Program at EPA. General review of the data indicates the presence of some low level semi-volatile pollutants. Preliminary opinion is that these low level contaminants do not pose an immediate threat to the health or the environment. Further evaluation will be done by the IAS Division and the OPH. If it is determined an immediate health threat is present, those potentially affected will be notified by this division.

Upon completion of the data validation process, the findings will be submitted to EPA in the SSI Report. The EPA will evaluate the findings and determine if the site qualifies for superfund status. If so, the site will qualify for the next pre-remedial stage in the Superfund ranking process. This stage is called the Listing Site Inspection stage and would involve more comprehensive investigation of the Valley Park Landfill.

Physical Inspections

The initial physical inspection on October 4, 1991 resulted in knowledge about the heating ventilation air conditioning (HVAC) system. Specific problem areas were identified and likely sampling areas. This initial inspection developed ideas for a more intensive inspection within the duct.

The second physical inspection was performed after the Indoor Air Quality Screen Survey was complete. Areas within the HVAC system were inspected. Weak areas in the HVAC system include: (1) The fan system near the smoking room was improperly ducted; (2) A build up of dust was noted in a return duct plenum. Samples collected identified hair, 1% pollen, and 1% mold as constituents in the dust on the return duct surfaces. Inspectors complained of nose and eye irritation when the dust material in the duct work was disturbed; (3) the vanes inside the duct work in room 133 appeared to have little impact on passing air. (4) The fan unit in room 201 was inspected and revealed damaged fiberglass insulation with frayed edges. The fiberglass fibers were tested negative for the presence of asbestos.

The inspections made by the East Baton Rouge Health Unit inspectors revealed numerous areas needing to be addressed. These areas are noted in Appendix D, pg. 15 of this report. The EBRP Health unit staff will perform follow-up on recommendations made by them.

Indoor Air Quality Screening Survey

The survey resulted with 62% participation , 167 of a total of 270 Valley Park Personnel. Building complaints are indicated by the most frequency were: (1) Lack of Air Circulation; (2) Temperature too hot; (3) Temperature too cold. Sixty-five areas were noted as areas of most concern. The most frequent health complaints were; (1) Neurological including headaches, dizziness and; (2) Upper respiratory complaints such as sinus congestion, throat irritation and runny nose; and, (3) Ocular complaints (See Appendix D).

Drinking Water Sampling

Three water samples collected by the EBRP Health Unit Sanitarian on November 6, 1991 from three locations did not result in the presence of bacteria. Three water samples collected by the DEQ/Ground Water Division staff from the same locations as collected above, did not result with the detections which exceeded the "Federal Primary and Secondary Drinking-Water Standards"(See Appendix B).

Indoor Ambient Air Sampling

None of the ten (10) hydrocarbon samples analyzed in the laboratory contained levels of pollutants which exceeded the Threshold Limit Values (TLV) established by the American conference of Governmental Industrial Hygienists (ACGIH) for any of the individual compounds. Carbon Dioxide was detected at 1200 ppm in room 133, or 33% higher than other areas of the building. This is above the maximum limit for carbon dioxide set by the American Society of Heating and Air-Conditioning Engineers (ASHAE) of 1000 parts per million. This does not exceed indoor air limits regulated by the Occupational Safety and Health Administration, Department of Labor. The Code of Federal Regulations 29 Part 1910.1000 lists a final rule limit on Carbon Dioxide at 10,000 ppm TWA. The TWA is the time weighted average exposure limit for a 10 hr. period.

Both sporulating and non-sporulating species of common fungi were found in the samples collected by OPH. Species identified were all typical soil fungi. Colony counts were performed on bacterial samples. Investigation of specific types was not performed.

V. CONCLUSIONS AND RECOMMENDATIONS

The most advanced methods for sampling indoor air were used in the investigation and the most advanced laboratory analysis was performed. It is not to say that the indoor air contaminant analysis is conclusive, only that the day of collection, no contaminants were found airborne which would indicate a more in depth study was needed. A combination of indoor air pollutants cause SBS. During the energy crisis of the early 1970's many public buildings closed their intake air vents, as did the Valley Park School Building. This could have contributed to poor indoor air quality at that time. The first week in October, 1991, the approximately five intake vents were opened to allow 15 to 20% more fresh air.

Many deficiencies were noted in the building. They are all important and are described in detail in the attached appendices. The following are the primary recommendations that could increase the indoor air quality in the building.

(1) The HVAC system should be professionally cleaned on a regular basis and a preventative maintenance cleaning program be installed.

(2) The HVAC system should be studied by a professional HVAC Engineer and improvements made, specifically the air exchange rate to promote proper air balancing. The higher than average CO2 found in room 133 can be removed by proper air mixing. Also, weak areas in the HVAC system, noted in appendix C, such as fans and ducting need to be addressed.

(3) Cleaning agents and other possible sources of contamination should be identified and removed from the interior of the building.

(4) More efficient air filters should be used. A high efficiency particulate accumulator removes 99.9% of particles as compared to the type presently in use which is rated at 30% efficiency.

The primary involvement of the LDEQ/IAS Division was to determine if the previous landfill site was contributing to reported adverse health affects. Indoor air quality is not the responsibility of the LDEQ unless, as in this case, the public health is potentially affected from a source that DEQ is inspecting. Based on the analyses results from the indoor air sampling, no harmful chemicals were being emitted into the indoor air environment of the building that originated from the landfill. Therefore, the DEQ has no authority beyond this point to regulate the indoor air environment or any of the recommendations made.

The DEQ/IAS Division plans to continue to evaluate the landfill and it's potential effects on the public health and the environment and will make those findings known. It is suggested the recommendations be implemented to improve the indoor air environment at the Valley Park Complex.

APPENDIX A

VALLEY PARK SAMPLING RESULTS

DECEMBER 6, 1991

DR. S.H. FREEMAN
ENVIRONMENTAL QUALITY SPECIALIST II
DAVID E. STAGG M.P.H.
ENVIRONMENTAL QUALITY SPECIALIST I

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY COMPLIANCE DIVISION
AIR TOXICS ANALYSIS SECTION

INTRODUCTION

On November 18th and 20th, 1991, personnel from the Air Toxics Analysis Section of the Department of Environmental Quality (DEQ) conducted indoor air quality monitoring at the Valley Park Complex in Baton Rouge, Louisiana. S. H. Freeman, Gerald Mack, and David E. Stagg were the Air Toxics Section personnel who conducted the air monitoring.

The air monitoring conducted on November 18th involved the following procedures:

1. Initially, a Flame Ionization Detector, the Organic Vapor Analyzer (OVA-128), was used to determine Total Hydrocarbons as parts per million carbon (ppmc). OVA-128 readings were taken in all the rooms in the Valley Park building to screen for possible sample sites for the canister and adsorbent tube sampling. See the results section for data.

2. Evacuated 6 liter canisters where then utilized to pull two air samples for GC/MS analysis. One sample was collected in the hallway outside of room 120 and the second sample was collected in room 201. These samples were analyzed for Non-methane Hydrocarbons. See the results section for data.

3. Solid adsorbent tubes containing Tenax GR were used to sample for the short Target Compound List (TCL). Two areas were sampled with the Tenax tubes, in the hallway outside of room 115 and in the hallway outside of room 126. See the results section for data.

4. Solid adsorbent tubes containing Carboxen 569 were used to sample for the Target Compound List (TCL). Six areas were sampled with the Carbon trap tubes. These areas were; room 133, room 134, room 118, room 105, hall near room 111, hall near room 102. See the results section for data.

The air monitoring procedures conducted on November 20th were as follows:

1. The Drager Pump System was utilized to measure the concentration of carbon dioxide. Eight areas were sampled with the Drager Tubes. These areas were; room 128B, room 133, room 131A, room 200, the hall near room 108, the hall near room 101, the hall near room 118, and the hall near room 125. See the results section for data.

2. The Miran 1A Gas Analyzer was also used to measure the concentration of carbon dioxide in the above listed eight areas. See the results section for data.

METHODS

The study involved various methods of sampling to ensure that all potential causes of indoor air quality complaints were addressed. Below are listed the methods used to sample for Total Hydrocarbons, Non-methane Hydrocarbons, all members of the Target Compounds List (TCL), all members of the Target Compounds Short List, and carbon dioxide.

ORGANIC VAPOR ANALYZER (OVA)

The OVA was used in the survey mode to determine the concentration of Total Hydrocarbons in the individual rooms. This instrument does not distinguish between methane and other organic compounds. The methods followed for this instrument can be found in the Standard Operating Procedures And Quality Assurance For Emergency Response Instrumentation located in the Standard Operating Procedures Manual for the Air Toxics Section.

SOLID ADSORBENT TUBE SAMPLING

Both the TENAX GR and Carboxen 569 tubes were used. The Tenax GR tubes were analyzed for the Target Compounds Short List and the Carboxen 569 tubes were analyzed for the Target Compounds List. The methods followed in conducting this sampling can be found at two different sources. The first source is the Standard Operating Procedures for the Toxic Air Sampler used in the Toxic Air Monitoring System (TAMS) located in the Standard Operating Procedures Manual for the Air Toxics Section. The second source can be found in Method 1P-1B located in the Compendium of Methods for the Determination of Air Pollutants in Indoor Air developed by the U.S. Environmental Protection Agency.

STAINLESS STEEL CANISTER SAMPLING

Evacuated stainless steel canisters were used to collect a contained volume of air which was analyzed by GC/MS. The canisters were carried to the sampling locations and the valve was opened to allow for the local ambient air to fill the canister to atmospheric pressure. At this point, the valve was closed and the canister was then taken back to the laboratory for GC/MS laboratory. The method followed for this sampling and analysis can be found in Method 1P-1A located in the Compendium of Methods for the Determination of Air Pollutants in Indoor Air developed by the U.S. Environmental Protection Agency.

DRAGER TUBE SAMPLING FOR CARBON DIOXIDE

A Drager Tube System was used to sample for carbon dioxide. The tubes used with this system had a measuring range of 100 to 3000 parts per million (PPM). They had a pump stroke equal to The methods followed for this sampling were the directions which came with the carbon dioxide sampling tubes and the Standard

Operating Procedures and Quality Assurance for Emergency Response Instrumentation found in the Standard Operating Procedures Manual for the Air Toxics Section.

MIRAN 1A ANALYZER SAMPLING

The Miran analyzer was used to scan the infrared spectral range between 2.5 um and 4.5 um. Carbon dioxide has an analytical wavelength within the above mentioned range and the carbon dioxide generated peak inside of this range was quantitated. Calibration for this instrument was conducted by taking an outside sample of ambient air to establish a peak for carbon dioxide and comparing that peak to the peaks for carbon dioxide for the inside samples. The concentration for the outside air sample was assigned a value of 365 parts per million. This value was chosen by averaging several recommended ambient carbon dioxide concentrations from reference sources. The methods followed for this instrument can be found in the Operation, Maintenance and Service Manual for the Miran 1A General Purpose Gas Analyzer which was provided by Foxboro Analytical.

Results of Carbon Dioxide Monitoring
Concentrations in Parts per Million

Location	Draeger Tube	Miran
Ambient air	400	365
Hall near 108	800	700
Hall near 101	800	750
Hall near 118	500	475
Room 128B	800	750
Room 133	1200	1075
Hall near 125	500	435
Room 131A	800	725
Room 200	800	765

(Total Hydrocarbons as Parts per Million Carbon - PPMC)

Room #	THC(PPMC)	Room #	THC(PPMC)
100	8	101	8
102	10	103	10
104	12	105	10
106	10	107	4
108	5	109	5
110	6	110-A	6
111	6	112	6
113	6	114	12
115	12	116	10
117	10	118	10
119	12	122	10
123	8	124	10
125	8	126	6
127	6	128	10
131-J	6	132	6
133	12	134	10
135-A	n/d	136-A	4
200	12	201	3
202	3	205	n/d
206	n/d	Gym	n/d
Coffie Room	5	Smoke Room	n/d
Rest Room (113)	16	Rest Room (114)	14
Rest Room (134)	14	Rest Room (134)	10
Rest Room (121)	32	Hallways	8 - 10
Janitor Room	4	Janitor Room	6

Results of Non-methane Hydrocarbon Analysis
(Parts per Billion)

Parameter	Hallway near Room 120 (PPB)	Room 201 (PPB)
Propane	5.4	3.7
Butane	3.3	4.4
2-methylbutane	3.9	3.7
pentane	0.8	1.0
2-methylpentane	0.4	0.3
3-methylpentane	0.3	1.4
hexane	0.4	0.0
methylcyclopentane	0.2	0.2
benzene	0.2	0.4
2-methylhexane	0.0	0.0
2,2,4-trimethylpentane	1.2	0.0
heptane	0.0	0.1
methylcyclohexane	0.2	0.0
toluene	1.7	1.7
octane	0.2	0.0
ethylbenzene	0.3	0.7
m+p xylene	0.8	1.0
o xylene	0.2	0.4
cumene	0.0	0.0
1,2,4-trimethylbenzene	2.9	4.1
Total NMOC	479.8	1,284.8

Results of GC/MS Qualitative Analysis
Concentrations in Parts per Billion

Parameter	Room 133	Room 134	Room 118
Freon-12	11.3	7.2	11.0
Chloromethane	4.3	2.4	3.2
Vinyl Chloride	N/D	0.1	N/D
Bromomethane	N/D	N/D	N/D
Chloroethane	N/D	N/D	N/D
Acetone	14.9	11.7	10.3
Freon-11	7.5	5.7	11.3
1,1-dichloroethene	0.1	N/D	N/D
Dichloromethane	8.2	4.8	8.7
Carbon disulfide	0.2	0.1	N/D
t-1,2-dichloroethene	N/D	N/D	N/D
1,1-dichloroethane	N/D	N/D	N/D
methyl ethyl ketone	0.6	0.5	1.0
c-1,2-dichloroethene	N/D	N/D	N/D
Chloroform	N/D	N/D	N/D
ethylene dichloride	N/D	N/D	N/D
1,1,1-trichloroethane	10.5	9.2	5.8
Benzene	0.6	0.2	0.1
Carbon Tetrachloride	N/D	N/D	N/D
1,2-dichloropropane	N/D	N/D	N/D
ethylene dibromide	N/D	N/D	N/D
Bromodichloromethane	N/D	N/D	N/D
Trichloroethylene	0.8	0.7	4.3
c-1,3-dichloropropene	N/D	N/D	N/D
4-methyl-2-pentanone	N/D	N/D	N/D
t-1,3-dichloropropene	N/D	N/D	N/D
1,1,2-trichloroethane	N/D	N/D	N/D
Toluene	1.1	0.9	1.1
2-Hexanone	N/D	N/D	N/D
Dibromochloromethane	N/D	N/D	N/D
Perchloroethylene	N/D	N/D	N/D
Chlorobenzene	N/D	N/D	N/D
Ethylbenzene	0.1	0.1	N/D
m-xylene	0.1	0.1	0.3
p-xylene	N/D	N/D	0.1
Bromoform	N/D	N/D	N/D
1,1,2,2-Tetrachloroethane	N/D	N/D	N/D
o-xylene	N/D	0.1	0.1
Styrene	N/D	N/D	N/D

Results of GC/MS Qualitative Analysis
Concentrations in Parts per Billion

Parameter	Hall near 111	Room 105	Hall near 102
Freon-12	21.0	10.4	15.4
Chloromethane	4.4	5.8	3.6
Vinyl Chloride	0.1	N/D	0.2
Bromomethane	N/D	N/D	N/D
Chloroethane	N/D	N/D	N/D
Acetone	10.5	11.5	8.0
Freon-11	12.1	6.0	5.5
1,1-dichloroethene	N/D	N/D	N/D
Dichloromethane	9.8	6.2	6.9
Carbon disulfide	0.4	N/D	N/D
t-1,2-dichloroethene	N/D	N/D	N/D
1,1-dichloroethane	N/D	N/D	N/D
methyl ethyl ketone	0.8	0.6	0.2
c-1,2-dichloroethene	N/D	N/D	N/D
Chloroform	N/D	9.5	N/D
ethylene dichloride	N/D	N/D	N/D
1,1,1-trichloroethane	3.8	1.7	2.3
Benzene	0.8	0.2	0.5
Carbon Tetrachloride	N/D	N/D	N/D
1,2-dichloropropane	N/D	N/D	N/D
ethylene dibromide	N/D	N/D	N/D
Bromodichloromethane	N/D	N/D	N/D
Trichloroethylene	1.4	0.8	0.8
c-1,3-dichloropropene	N/D	N/D	N/D
4-methyl-2-pentanone	N/D	N/D	N/D
t-1,3-dichloropropene	N/D	N/D	N/D
1,1,2-trichloroethane	N/D	N/D	N/D
Toluene	1.5	1.2	1.4
2-Hexanone	N/D	N/D	N/D
Dibromochloromethane	N/D	N/D	N/D
Perchloroethylene	N/D	N/D	N/D
Chlorobenzene	N/D	N/D	N/D
Ethylbenzene	N/D	0.1	N/D
m-xylene	0.2	N/D	0.2
p-xylene	0.1	N/D	0.1
Bromoform	N/D	N/D	N/D
1,1,2,2-Tetrachloroethane	N/D	N/D	N/D
o-xylene	0.1	0.1	N/D
Styrene	N/D	N/D	N/D

Results of GC/MS Qualitative Analysis Target Compounds List - Tenax GR
Concentrations in Parts per Billion

Parameter	Hall near 115	Hall near 126
Acetone	9.14	9.25
1,1-dichloroethene	0.15	0.17
Dichloromethane	9.06	5.39
Carbon disulfide	0.15	0.09
t-1,2-dichloroethene	N/D	N/D
1,1-dichloroethane	N/D	N/D
methyl ethyl ketone	0.39	0.92
c-1,2-dichloroethene	N/D	N/D
Chloroform	0.05	0.06
ethylene dichloride	0.14	0.16
1,1,1-trichloroethane	3.18	3.31
Benzene	1.00	4.66
Carbon Tetrachloride	0.13	0.75
1,2-dichloropropane	N/D	0.23
ethylene dibromide	N/D	N/D
Bromodichloromethane	N/D	N/D
Trichloroethylene	1.25	1.45
c-1,3-dichloropropene	N/D	N/D
4-methyl-2-pentanone	N/D	N/D
t-1,3-dichloropropene	N/D	N/D
1,1,2-trichloroethane	N/D	N/D
Toluene	0.30	4.80
2-Hexanone	N/D	N/D
Dibromochloromethane	N/D	N/D
Perchloroethylene	1.06	0.11
Chlorobenzene	0.02	0.03
Ethylbenzene	0.36	0.53
m-xylene	0.62	0.84
p-xylene	0.21	0.28
Bromoform	N/D	N/D
1,1,2,2-Tetrachloroethane	N/D	N/D
o-xylene	0.30	0.44
Styrene	0.20	0.31

Most abundant other compounds identified at low ppb concentrations

n-butane	ethanol	n-propylbenzene
2-methylbutane	isopropanol	3-ethyltoluene
n-pentane	acetonitrile	4-ethyltoluene
isoprene	acrylonitrile	1,2,4-trimethylbenzene
2-methyl-2-propanol	1-propanol	1,2,3-trimethylbenzene
2,3-dimethylbutane	2-methylpentane	Limonene
3-methylpentane	hexane	beta-pinene
methylcyclopentane	cyclohexane	2,4,6-trimethyloctane
2,3-dimethylpentane	2-methylhexane	2,2,3-trimethylhexane
3-methylhexane	2,3-dimethylhexane	n-butylbenzene
2,2,4-trimethylpentane	n-heptane	2,3,4-trimethyldecane
methylcyclohexane	2,4-dimethylhexane	napthalene
2,3,4-trimethylpentane	2-methylheptane	undecane
hexanal	2,4-dimethylheptane	decane
n-nonane	Cumene	dodecane
Benzaldehyde	alpha-pinene	2,5,6-trimethyldecane

APPENDIX B

State of Louisiana
Department of Environmental Quality

BUDDY ROEMER
Governor

PAUL TEMPLET
Secretary

M E M O

To: Tom Mayhall, IAS Division

From: Mike Bradley, Ground Water Division

Date: January 6, 1992

Subject: Valley Park Sample Analysis

==

Attached, please find the analytical results on the three samples taken at the Valley Park site on November 7, 1991. Two water fountains (room 118-119 area and room 122-123 area) and the kitchen tap were sampled for volatile organics, semi-volatile organics plus pesticides and PCB's and priority metals. The samples were analyzed at the LDEQ Water Lab in Baton Rouge. None of the results were found to exceed the "Federal Primary and Secondary Drinking-Water Standards". The "phthalate's" that were detected in low levels are commonly found in samples with containers having plastic caps or may be the result of plastic piping in the water system. All other results, as is found in the attached results, came back as non-detect (ND). If you have any further questions or request any assistance on this or any future issues involving ground water please contact myself or Rob Frischhertz at the Capital Regional Office at (504) 295-8941.

jmb

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DEC 17 1991

GROUND WATER
PROTECTION DIVISION

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

VOLATILE ORGANIC ANALYSIS

Sample Location: Valley Park

Sample Number	: GW70-110791-C01		Analyzed By	: LK	
Permit Number	: -		Date Analyzed	: 111991	
Sample Date	: 110791		Quantified By	: LK	
Sample Time	: 1000		Date Received	: 110791	
Sampled By	: M. Bradley		Lab Supervisor	: YHL	
Sample Type	: Water		Percent Moisture	: NA	
			Wet/Dry Basis	: NA	

Instrument : Finnigan OWA

Comments :

PRIORITY POLLUTANTS BY EPA METHOD 8240 CONCENTRATION (ppb)

PARAMETER	SAMPLE	BLANK	DETECTION LIMIT
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Trichlorofluoromethane	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
t-1,2-Dichloroethene	ND	ND	5
Chloroform	*D-2	ND	5
1,2-Dichloroethane (EDC)	ND	ND	5
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
t-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5

VOLATILE ORGANIC ANALYSIS CONTINUED
Sample Number : GW70-110791-C01

PRIORITY POLLUTANTS BY EPA METHOD 8240 CONCENTRATION (ppb)

PARAMETER	SAMPLE	BLANK	DETECTION LIMIT
c-1,3-Dichloropropene	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
2-Chloroethylvinyl Ether	ND	ND	10
Bromoform	ND	ND	5
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylene (Total)	ND	ND	5
1,3-Dichlorobenzene	ND	ND	5
1,2-Dichlorobenzene	ND	ND	5
1,4-Dichlorobenzene	ND	ND	5
			SURROGATE RECOVERY %
1,2-Dichloroethane d_4			124
Toluene-d_8			104
4-Bromofluorobenzene			105

NON-PRIORITY POLLUTANTS DETECTED: ESTIMATED ppb

*Below compound detection limit.

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION

QA/QC SUMMARY
VOLATILE ORGANICS

VOLATILE BLANK SPIKE & MATRIX SPIKE RESULTS

PARAMETER	SPIKE LEVEL	UNITS	RECOVERY (%) BLANK SPIKE	MS	MSD	LIMITS
1,1-Dichloroethene	20	ppb	109	116	95	Detected-234
Trichloroethene	20	ppb	100	97	99	71-157
Benzene	20	ppb	100	98	100	37-160
Toluene	20	ppb	94	93	95	47-150
Chlorobenzene	20	ppb	95	92	95	37-151

MATRIX SPIKE VOLATILE SURROGATE RECOVERY

SAMPLE	1,2-DICHLOROETHANE-d4	TOLUENE-d8	BROMOFLUOROBENZENE
Matrix Spike	122	96	99
Matrix Spike Dup.	109	101	104
Blank Matrix Spike	123	99	102
C LIMITS (LOW/MED SOIL)	(70 - 121)	(81 - 117)	(74 - 121)

S-Matrix Spike
D-Matrix Spike Duplicate

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

VOLATILE ORGANIC ANALYSIS

Sample Location: Valley Park

Sample Number : GW70-110791-B01
Permit Number : -
Sample Date : 110791
Sample Time : 0950
Sampled By : M. Bradley
Sample Type : Water

Instrument : Finnigan OWA

Comments :

Analyzed By : LK LK
Date Analyzed : 111991
Quantified By : LK
Date Received : 110791
Lab Supervisor : YHL
Percent Moisture: NA
Wet/Dry Basis : NA

PRIORITY POLLUTANTS BY EPA METHOD 8240 CONCENTRATION (ppb)

PARAMETER	SAMPLE	BLANK	DETECTION LIMIT
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Trichlorofluoromethane	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
t-1,2-Dichloroethene	ND	ND	5
Chloroform	D-2	ND	5
1,2-Dichloroethane (EDC)	ND	ND	5
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
t-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5

VOLATILE ORGANIC ANALYSIS CONTINUED
Sample Number : GW70-110791-B01

PRIORITY POLLUTANTS BY EPA METHOD 8240 CONCENTRATION (ppb)

PARAMETER	SAMPLE	BLANK	DETECTION LIMIT
c-1,3-Dichloropropene	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
2-Chloroethylvinyl Ether	ND	ND	10
Bromoform	ND	ND	5
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylene (Total)	ND	ND	5
1,3-Dichlorobenzene	ND	ND	5
1,2-Dichlorobenzene	ND	ND	5
1,4-Dichlorobenzene	ND	ND	5
			SURROGATE RECOVERY %
1,2-Dichloroethane d_4			88
Toluene-d_8			96
4-Bromofluorobenzene			97

NON-PRIORITY POLLUTANTS DETECTED: ESTIMATED ppb

*Below compound detection limit.

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION

QA/QC SUMMARY
VOLATILE ORGANICS

VOLATILE BLANK SPIKE & MATRIX SPIKE RESULTS

PARAMETER	SPIKE LEVEL	UNITS	RECOVERY (%) BLANK SPIKE	MS	MSD	LIMITS
1,1-Dichloroethene	20	ppb	109	116	95	Detected-234
Trichloroethene	20	ppb	100	97	99	71-157
Benzene	20	ppb	100	98	100	37-160
Toluene	20	ppb	94	93	95	47-150
Chlorobenzene	20	ppb	95	92	95	37-151

MATRIX SPIKE VOLATILE SURROGATE RECOVERY

SAMPLE	1,2-DICHLOROETHANE-d4	TOLUENE-d8	BROMOFLUOROBENZENE
Matrix Spike	122	96	99
Matrix Spike Dup.	109	101	104
Blank Matrix Spike	123	99	102
QC LIMITS (LOW/MED SOIL)	(70 - 121)	(81 - 117)	(74 - 121)

MS-Matrix Spike
MSD-Matrix Spike Duplicate

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

VOLATILE ORGANIC ANALYSIS

Sample Location: Valley Park

Sample Number : GW70-110791-A01
Permit Number : -
Sample Date : 110791
Sample Time : 0945
Sampled By : M. Bradley
Sample Type : Water

Instrument : Finnigan OWA

Comments :

Analyzed By : LK LK
Date Analyzed : 111891
Quantified By : LK
Date Received : 110791
Lab Supervisor : YHL YH
Percent Moisture: NA
Wet/Dry Basis : NA

PRIORITY POLLUTANTS BY EPA METHOD 8240 CONCENTRATION (ppb)

PARAMETER	SAMPLE	BLANK	DETECTION LIMIT
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	5
Trichlorofluoromethane	ND	ND	5
1,1-Dichloroethene	ND	ND	5
1,1-Dichloroethane	ND	ND	5
t-1,2-Dichloroethene	ND	ND	5
Chloroform	*D-2	ND	5
1,2-Dichloroethane (EDC)	ND	ND	5
1,1,1-Trichloroethane	ND	ND	5
Carbon Tetrachloride	ND	ND	5
Bromodichloromethane	ND	ND	5
1,2-Dichloropropane	ND	ND	5
t-1,3-Dichloropropene	ND	ND	5
Trichloroethene	ND	ND	5
Dibromochloromethane	ND	ND	5

VOLATILE ORGANIC ANALYSIS CONTINUED
Sample Number : GW70-110791-A01

PRIORITY POLLUTANTS BY EPA METHOD 8240 CONCENTRATION (ppb)

PARAMETER	SAMPLE	BLANK	DETECTION LIMIT
c-1,3-Dichloropropene	ND	ND	5
1,1,2-Trichloroethane	ND	ND	5
Benzene	ND	ND	5
2-Chloroethylvinyl Ether	ND	ND	10
Bromoform	ND	ND	5
Tetrachloroethene	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	5
Toluene	ND	ND	5
Chlorobenzene	ND	ND	5
Ethylbenzene	ND	ND	5
Styrene	ND	ND	5
Xylene (Total)	ND	ND	5
1,3-Dichlorobenzene	ND	ND	5
1,2-Dichlorobenzene	ND	ND	5
1,4-Dichlorobenzene	ND	ND	5
			SURROGATE RECOVERY %
1,2-Dichloroethane d_4			113
Toluene-d_8			97
4-Bromofluorobenzene			99

NON-PRIORITY POLLUTANTS DETECTED: ESTIMATED ppb

*Below compound detection limit.

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION

QA/QC SUMMARY
VOLATILE ORGANICS

VOLATILE BLANK SPIKE & MATRIX SPIKE RESULTS

PARAMETER	SPIKE LEVEL	UNITS	RECOVERY (%) BLANK SPIKE	MS	MSD	LIMITS
1,1-Dichloroethene	20	ppb	109	116	95	Detected-234
Trichloroethene	20	ppb	100	97	99	71-157
Benzene	20	ppb	100	98	100	37-160
Toluene	20	ppb	94	93	95	47-150
Chlorobenzene	20	ppb	95	92	95	37-151

MATRIX SPIKE VOLATILE SURROGATE RECOVERY

SAMPLE	1,2-DICHLOROETHANE-d4	TOLUENE-d8	BROMOFLUOROBENZENE
Matrix Spike	122	96	99
Matrix Spike Dup.	109	101	104
Blank Matrix Spike	123	99	102
QC LIMITS (LOW/MED SOIL)	(70 - 121)	(81 - 117)	(74 - 121)

MS-Matrix Spike
MSD-Matrix Spike Duplicate

DATE TYPED: December 12, 1991 REVIEWED BY: SJ 12/16/91

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
WATER LABORATORY DATA SHEET

COMPANY : Valley Park
LOCATION :

COLLECTOR: M. Bradley
BASIN :
WATERBODY:
LA :
WP :

DATE : 110791
COMPLAINT#:
SURVEY :
SPILL# :
CSI :

ADDITIONAL COMMENTS:

DATE RECEIVED BY LABORATORY: 110791 TIME: 1030 BY: M. Raol
CHAIN OF CUSTODY: YES

SAMPLE NUMBER	TIME/ LOCATION	PARAMETER	VALUE ppb	ANALYST	DATE	EPA METHOD
GW70-110791-C-03	1000	Sb	<3.6	DR	111891	204.2
		As	<1.3	DR	112091	206.2
		Be	0.1	DR	111491	210.2
		Cd	0.2	DR	112691	213.2
		Cr	<0.3	DR	120291	218.2
		Cu	4.0	DR	112591	220.2
		Pb	3.2	DR	121191	239.2
		Hg	0.2	DR	120591	245.1
		Ni	<1.5	DR	120491	249.2
		Se	<1.2	DR	111891	270.2
		Ag	<0.1	DR	111991	272.2
		Tl	<0.7	DR	111991	279.2
		Zn	67	DR	112091	289.1

ATE TYPED: December 12, 1991 REVIEWED BY: [handwritten initials] 12/16/91

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
WATER LABORATORY DATA SHEET

COMPANY : Valley Park
LOCATION :

COLLECTOR: M. Bradley
BASIN :
WATERBODY:
LA :
NP :

DATE : 110791
COMPLAINT#:
SURVEY :
SPILL# :
CSI :

ADDITIONAL COMMENTS:

DATE RECEIVED BY LABORATORY: 110791 TIME: 1030 BY: M. Raol
CHAIN OF CUSTODY: YES

SAMPLE NUMBER	TIME/ LOCATION	PARAMETER	VALUE ppb	ANALYST	DATE	EPA METHOD
GW70-110791-B-03	0950	Sb	<3.6	DR	111891	204.2
		As	<1.3	DR	112091	206.2
		Be	<0.1	DR	111491	210.2
		Cd	0.2	DR	112691	213.2
		Cr	0.3	DR	120291	218.2
		Cu	14.6	DR	112591	220.2
		Pb	9.7	DR	121191	239.2
		Hg	0.2	DR	120591	245.1
		Ni	3.1	DR	120491	249.2
		Se	<1.2	DR	111891	270.2
		Ag	<0.1	DR	111991	272.2
		Tl	<0.7	DR	111991	279.2
		Zn	22	DR	112091	289.1

DATE TYPED: December 12, 1991 REVIEWED BY: 9i 12/16/91

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
WATER LABORATORY DATA SHEET

COMPANY : Valley Park
LOCATION :

COLLECTOR: M. Bradley
BASIN :
WATERBODY:
LA :
WP :

DATE : 110791
COMPLAINT#:
SURVEY :
SPILL# :
CSI :

ADDITIONAL COMMENTS:

DATE RECEIVED BY LABORATORY: 110791 TIME: 1030 BY: M. Raol
CHAIN OF CUSTODY: YES

SAMPLE NUMBER	TIME/ LOCATION	PARAMETER	VALUE ppb	ANALYST	DATE	EPA METHOD
GW70-110791-A-03	0945	Sb	<3.6	DR	111891	204.2
		As	<1.3	DR	112091	206.2
		Be	0.1	DR	111491	210.2
		Cd	0.2	DR	112691	213.2
		Cr	0.6	DR	120291	218.2
		Cu	21.1	DR	112591	220.2
		Pb	6.7	DR	121191	239.2
		Hg	0.2	DR	120591	245.1
		Ni	20.2	DR	120491	249.2
		Se	<1.2	DR	111891	270.2
		Ag	<0.1	DR	111991	272.2
		Tl	<0.7	DR	111991	279.2
		Zn	<10	DR	112091	289.1

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

POLYCHLORINATED BIPHENYL ANALYSIS REPORT

Sample Location: Valley Park, Baton Rouge

Permit Number : -
Sample Number : GW70-110791-C-02
Sample Date : 110791
Sampled Time : 1000
Sampled By : M. Bradley
Sample Type : Ground Water

Instrument : Finnigan 1020 GC/MS/DS

Extracted By : PBA
Date Extracted : 112091
Analyzed By : YHL YHL
Date Analyzed : 112691
Quantified By : YHL
Date Received : 110791
Lab Supervisor : YHL

Comments : Selective Ion Method is used for analysis

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
Aroclor 1254	ND	5
Aroclor 1260	ND	5
Aroclor 1016/1242	ND	5
Aroclor 1248	ND	5
Aroclor 1232	ND	5
Aroclor 1221	ND	5

12/6/1

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

PESTICIDE ORGANIC ANALYSIS

Sample Location: Valley Park, Baton Rouge

Permit Number : -
Sample Number : GW70-110791-C-02
Sample Date : 110791
Sampled Time : 1000
Sampled By : M. Bradley
Sample Type : Ground Water

Instrument : Finnigan 1020 GC/MS/DS

Extracted By : PBA
Date Extracted : 112091
Analyzed By : YHL
Date Analyzed : 112691
Quantified By : YHL
Date Received : 110791
Lab Supervisor : YHL

Comments : Selective Ion Method is used for analysis

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
alpha-BHC	ND	1
beta-BHC	ND	1
delta-BHC	ND	1
gamma-BHC	ND	1
Heptachlor	ND	1
Aldrin	ND	1
Heptachlor Epoxide	ND	1
Endosulfan I	ND	1
4,4'-DDE	ND	1
Dieldrin	ND	1
Endrin	ND	1
Endosulfan II	ND	1
4,4'-DDD	ND	1
Endrin Aldehyde	ND	1
4,4'-DDT	ND	1
Endosulfan Sulfate	ND	1
Chlordane	ND	1
Toxaphene	ND	-
Endrin Ketone	ND	1
Methoxychlor	ND	1

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

Sample Location: Valley Park, Baton Rouge

Permit Number : -
Sample Number : GW70-110791-C-02
Sample Date : 110791
Sampled Time : 1000
Sampled By : M. Bradley
Sample Type : Ground Water

Instrument : Finnigan 1020 GC/MS/DS

Extracted By : PBA
Date Extracted : 112091
Analyzed By : YHL
Date Analyzed : 112691
Quantified By : YHL
Date Received : 110791
Lab Supervisor : YHL

Comments : Selective Ion Method is used for analysis

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

(Surrogate Standard Finnigan 1020)	Recovery %
Nitrobenzene-d_5	122
2-Fluoro-1, 1-biphenyl	49
P-Terphenyl-d_{14}	69

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

SEMIVOLATILE EXTRACTABLE ORGANIC ANALYSIS

Sample Location: Valley Park, Baton Rouge

Permit Number : -
Sample Number : GW70-110791-C-02
Sample Date : 110791
Sampled Time : 1000
Sampled By : M. Bradley
Sample Type : Ground Water

Instrument : Finnigan 4530 GC/MS/DS

Extracted By : PBA
Date Extracted : 11209
Analyzed By : YHL
Date Analyzed : 11269
Quantified By : YHL
Date Received : 11079
Lab Supervisor : YHL

Comments :

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
N-Nitrosodimethylamine	ND	-
Bis(2-Chloroethyl)Ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
N-Nitroso-di-n-Propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
Bis(2-Chloroethoxy)Methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
Hexachlorobutadiene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
Dimethylphthalate	ND	10
2,6-Dinitrotoluene	ND	10
Acenaphthylene	ND	10

SAMPLE NO. GW70-110791-C-02
SEMIVOLATILE EXTRACTABLE ORGANIC ANALYSIS CONTINUED

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
Acenaphthene	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
Fluorene	ND	10
4-Chlorophenylphenyl Ether	ND	10
N-Nitrosodiphenylamine (1)	ND	10
4-Bromophenylphenyl Ether	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butyl phthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Benzidine	ND	50
Butyl benzyl phthalate	ND	10
Bis(2-ethylhexyl) phthalate	47	10
3,3-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	10
Chrysene	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenzo(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10
Bis(2-chloroisopropyl)Ether	ND	10

(1) Cannot be distinguished from Diphenylamine

SAMPLE NO. GW70-110791-C-02

SEMIVOLATILE EXTRACTABLE ORGANIC ANALYSIS CONTINUED

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
2-Picoline	ND	10
Methyl Methanesulfonate	ND	10
Ethyl Methanesulfonate	ND	20
Aniline	ND	10
Phenol	ND	10
2-chlorophenol	ND	10
Benzyl Alcohol	ND	20
2-Methylphenol	ND	10
4-Methylphenol	ND	10
Acetophenone	ND	10
N-Nitrosopiperidine	ND	20
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
Benzoic Acid	ND	50
α,α-Dimethylphenethylamine	ND	10
2,4-Dichlorophenol	ND	10
4-Chloroaniline	ND	20
2,6-Dichlorophenol	ND	10
N-Nitroso-di-n-Butylamine	ND	10
4-Chloro-3-Methylphenol	ND	20
2-Methylnaphthalene	ND	10
1,2,4,5-Tetrachlorobenzene	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
1-Chloronaphthalene	ND	10
2-Nitroaniline	ND	50
3-Nitroaniline	ND	50

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

SAMPLE NO. GW70-110791-C-02
SEMIVOLATILE EXTRACTABLE ORGANIC ANALYSIS CONTINUED

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
2,4-Dinitrophenol	ND	50
4-Nitrophenol	ND	50
Pentachlorobenzene	ND	10
Dibenzofuran	ND	10
1-Naphthylamine	ND	10
2,3,4,6-Tetrachlorophenol	ND	10
2-Naphthylamine	ND	10
4-Nitroaniline	ND	50
4,6-Dinitro-2-Methylphenol	ND	50
1,2-Diphenylhydrazine	ND	10
Phenacetin	ND	20
4-Aminobiphenyl	ND	20
Pentachlorophenol	ND	50
Pronamide	ND	10
Pentachloronitrobenzene	ND	20
p-Dimethylaminoazobenzene	ND	10
7,12-Dimethylbenz(A)anthracene	ND	10
3-Methylcholanthrene	ND	10
Dibenz(A,J)acridine	ND	10

(Surrogate Standard 4530)	Recovery %
2-Fluorophenol	39
Phenol-d_6	54
Nitrobenzene-d_5	91
2-Fluoro-1, 1-biphenyl	78
2,4,6-Tribromophenol	83
P-Terphenyl-d_{14}	85

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

POLYCHLORINATED BIPHENYL ANALYSIS REPORT

Sample Location: Valley Park, Baton Rouge

Permit Number : -
Sample Number : GW70-110791-A-02
Sample Date : 110791
Sample Time : 0945
Sampled By : M. Bradley
Sample Type : Ground Water
Instrument : Finnigan 1020 GC/MS/DS

Extracted By : PBA
Date Extracted : 112091
Analyzed By : YHL
Date Analyzed : 112691
Quantified By : YHL
Date Received : 110791
Lab Supervisor : YHL

Comments : Selective Ion Method is used for analysis

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
Aroclor 1254	ND	5
Aroclor 1260	ND	5
Aroclor 1016/1242	ND	5
Aroclor 1248	ND	5
Aroclor 1232	ND	5
Aroclor 1221	ND	5

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LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

PESTICIDE ORGANIC ANALYSIS

Sample Location: Valley Park, Baton Rouge

Permit Number : -
Sample Number : GW70-110791-A-02
Sample Date : 110791
Sample Time : 0945
Sampled By : M. Bradley
Sample Type : Ground Water
Instrument : Finnigan 1020 GC/MS/DS

Extracted By : PBA
Date Extracted : 112091
Analyzed By : YHL
Date Analyzed : 112691
Quantified By : YHL
Date Received : 110791
Lab Supervisor : YHL

Comments : Selective Ion Method is used for analysis

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
alpha-BHC	ND	1
beta-BHC	ND	1
delta-BHC	ND	1
gamma-BHC	ND	1
Heptachlor	ND	1
Aldrin	ND	1
Heptachlor Epoxide	ND	1
Endosulfan I	ND	1
4,4'-DDE	ND	1
Dieldrin	ND	1
Endrin	ND	1
Endosulfan II	ND	1
4,4'-DDD	ND	1
Endrin Aldehyde	ND	1
4,4'-DDT	ND	1
Endosulfan Sulfate	ND	1
Chlordane	ND	1
Toxaphene	ND	-
Endrin Ketone	ND	1
Methoxychlor	ND	1

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

ample Location: Valley Park, Baton Rouge

ermit Number : -
ample Number : GW70-110791-A-02
ample Date : 110791
ample Time : 0945
ampled By : M. Bradley
ample Type : Ground Water
nstrument : Finnigan 1020 GC/MS/DS

Extracted By : PBA
Date Extracted : 112091
Analyzed By : YHL
Date Analyzed : 112691
Quantified By : YHL
Date Received : 110791
Lab Supervisor : YHL

omments : Selective Ion Method is used for analysis

EMIVOLATILE ORGANICS BY EPA METHOD 8270

(Surrogate Standard Finnigan 1020)	Recovery %
Nitrobenzene-d_5	82
2-Fluoro-1, 1-biphenyl	43
P-Terphenyl-d_{14}	55

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

SEMIVOLATILE EXTRACTABLE ORGANIC ANALYSIS

ample Location: Valley Park, Baton Rouge

ermit Number : -
ample Number : GW70-110791-A-02
ample Date : 110791
ample Time : 0945
ampled By : M. Bradley
ample Type : Ground Water
nstrument : Finnigan 4530 GC/MS/DS

Extracted By : PBA
Date Extracted : 112091
Analyzed By : YHL
Date Analyzed : 112691
Quantified By : YHL
Date Received : 110791
Lab Supervisor : YHL

omments :

EMIVOLATILE ORGANICS BY EPA METHOD 8270

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
N-Nitrosodimethylamine	ND	-
Bis(2-Chloroethyl)Ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
N-Nitroso-di-n-Propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
Bis(2-Chloroethoxy)Methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
Hexachlorobutadiene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
Dimethylphthalate	ND	10
2,6-Dinitrotoluene	ND	10
Acenaphthylene	ND	10

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SEMIVOLATILE ORGANICS BY EPA METHOD 8270

SAMPLE NO. GW70-110791-A-02
SEMIVOLATILE EXTRACTABLE ORGANIC ANALYSIS CONTINUED

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
Acenaphthene	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
Fluorene	ND	10
4-Chlorophenylphenyl Ether	ND	10
N-Nitrosodiphenylamine (1)	ND	10
4-Bromophenylphenyl Ether	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butyl phthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Benzidine	ND	50
Butyl benzyl phthalate	22	10
Bis(2-ethylhexyl) phthalate	ND	10
3,3-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	10
Chrysene	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenzo(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10
Bis(2-chloroisopropyl)Ether	ND	10

(1) Cannot be distinguished from Diphenylamine

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

SAMPLE NO. GW70-110791-A-02
SEMIVOLATILE EXTRACTABLE ORGANIC ANALYSIS CONTINUED

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
2-Picoline	ND	10
Methyl Methanesulfonate	ND	10
Ethyl Methanesulfonate	ND	20
Aniline	ND	10
Phenol	ND	10
2-chlorophenol	ND	10
Benzyl Alcohol	ND	20
2-Methylphenol	ND	10
4-Methylphenol	ND	10
Acetophenone	ND	10
N-Nitrosopiperidine	ND	20
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
Benzoic Acid	ND	50
α,α-Dimethylphenethylamine	ND	10
2,4-Dichlorophenol	ND	10
4-Chloroaniline	ND	20
2,6-Dichlorophenol	ND	10
N-Nitroso-di-n-Butylamine	ND	10
4-Chloro-3-Methylphenol	ND	20
2-Methylnaphthalene	ND	10
1,2,4,5-Tetrachlorobenzene	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
1-Chloronaphthalene	ND	10
2-Nitroaniline	ND	50
3-Nitroaniline	ND	50

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

SAMPLE NO. GW70-110791-A-02
SEMIVOLATILE EXTRACTABLE ORGANIC ANALYSIS CONTINUED

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
2,4-Dinitrophenol	ND	50
4-Nitrophenol	ND	50
Pentachlorobenzene	ND	10
Dibenzofuran	ND	10
1-Naphthylamine	ND	10
2,3,4,6-Tetrachlorophenol	ND	10
2-Naphthylamine	ND	10
4-Nitroaniline	ND	50
4,6-Dinitro-2-Methylphenol	ND	50
1,2-Diphenylhydrazine	ND	10
Phenacetin	ND	20
4-Aminobiphenyl	ND	20
Pentachlorophenol	ND	50
Pronamide	ND	10
Pentachloronitrobenzene	ND	20
p-Dimethylaminoazobenzene	ND	10
7,12-Dimethylbenz(A)anthracene	ND	10
3-Methylcholanthrene	ND	10
Dibenz(A,J)acridine	ND	10

(Surrogate Standard 4530)	Recovery %
2-Fluorophenol	67
Phenol-d_6	74
Nitrobenzene-d_5	88
2-Fluoro-1, 1-biphenyl	79
2,4,6-Tribromophenol	106
P-Terphenyl-d_{14}	83

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

POLYCHLORINATED BIPHENYL ANALYSIS REPORT

Sample Location: Valley Park, Baton Rouge

Permit Number : -
Sample Number : GW70-110791-B-02
Sample Date : 110791
Sample Time : 0950
Sampled By : M. Bradley
Sample Type : Ground Water
Instrument : Finnigan 1020 GC/MS/DS

Extracted By : PBA
Date Extracted : 112091
Analyzed By : YHL
Date Analyzed : 112691
Quantified By : YHL
Date Received : 110791
Lab Supervisor : YHL

Comments : Selective Ion Method is used for analysis

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
Aroclor 1254	ND	5
Aroclor 1260	ND	5
Aroclor 1016/1242	ND	5
Aroclor 1248	ND	5
Aroclor 1232	ND	5
Aroclor 1221	ND	5

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

PESTICIDE ORGANIC ANALYSIS

Sample Location: Valley Park, Baton Rouge

Permit Number : -
Sample Number : GW70-110791-B-02
Sample Date : 110791
Sample Time : 0950
Sampled By : M. Bradley
Sample Type : Ground Water
Instrument : Finnigan 1020 GC/MS/DS

Extracted By : PBA
Date Extracted : 112091
Analyzed By : YHL
Date Analyzed : 112691
Quantified By : YHL
Date Received : 110791
Lab Supervisor : YHL

Comments : Selective Ion Method is used for analysis

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
alpha-BHC	ND	1
beta-BHC	ND	1
delta-BHC	ND	1
gamma-BHC	ND	1
Heptachlor	ND	1
Aldrin	ND	1
Heptachlor Epoxide	ND	1
Endosulfan I	ND	1
4,4'-DDE	ND	1
Dieldrin	ND	1
Endrin	ND	1
Endosulfan II	ND	1
4,4'-DDD	ND	1
Endrin Aldehyde	ND	1
4,4'-DDT	ND	1
Endosulfan Sulfate	ND	1
Chlordane	ND	1
Toxaphene	ND	-
Endrin Ketone	ND	1
Methoxychlor	ND	1

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

Sample Location: Valley Park, Baton Rouge

Permit Number	: -		
Sample Number	: GW70-110791-B-02	Extracted By	: PBA
Sample Date	: 110791	Date Extracted	: 112091
Sample Time	: 0950	Analyzed By	: YHL
Sampled By	: M. Bradley	Date Analyzed	: 112691
Sample Type	: Ground Water	Quantified By	: YHL
Instrument	: Finnigan 1020 GC/MS/DS	Date Received	: 110791
		Lab Supervisor	: YHL

Comments : Selective Ion Method is used for analysis

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

(Surrogate Standard Finnigan 1020)	Recovery %
Nitrobenzene-d_5	115
2-Fluoro-1, 1-biphenyl	47
P-Terphenyl-d_{14}	67

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
TECHNICAL SERVICES DIVISION
LABORATORY SERVICES SECTION-WATER

SEMIVOLATILE EXTRACTABLE ORGANIC ANALYSIS

Sample Location: Valley Park, Baton Rouge

Permit Number : -
Sample Number : GW70-110791-B-02
Sample Date : 110791
Sample Time : 0950
Sampled By : M. Bradley
Sample Type : Ground Water
Instrument : Finnigan 4530 GC/MS/DS

Extracted By : PBA
Date Extracted : 112091
Analyzed By : YHL
Date Analyzed : 112691
Quantified By : YHL
Date Received : 110791
Lab Supervisor : YHL

Comments :

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
N-Nitrosodimethylamine	ND	-
Bis(2-Chloroethyl)Ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
N-Nitroso-di-n-Propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
Bis(2-Chloroethoxy)Methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
Hexachlorobutadiene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
Dimethylphthalate	ND	10
2,6-Dinitrotoluene	ND	10
Acenaphthylene	ND	10

SAMPLE NO. GW70-110791-B-02
SEMIVOLATILE EXTRACTABLE ORGANIC ANALYSIS CONTINUED

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
Acenaphthene	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
Fluorene	ND	10
4-Chlorophenylphenyl Ether	ND	10
N-Nitrosodiphenylamine (1)	ND	10
4-Bromophenylphenyl Ether	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butyl phthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Benzidine	ND	50
Butyl benzyl phthalate	ND	10
Bis(2-ethylhexyl) phthalate	23	10
3,3-Dichlorobenzidine	ND	20
Benzo(a)anthracene	ND	10
Chrysene	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenzo(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10
Bis(2-chloroisopropyl)Ether	ND	10

(1) Cannot be distinguished from Diphenylamine

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

SAMPLE NO. GW70-110791-B-02
SEMIVOLATILE EXTRACTABLE ORGANIC ANALYSIS CONTINUED

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
2-Picoline	ND	10
Methyl Methanesulfonate	ND	10
Ethyl Methanesulfonate	ND	20
Aniline	ND	10
Phenol	ND	10
2-chlorophenol	ND	10
Benzyl Alcohol	ND	20
2-Methylphenol	ND	10
4-Methylphenol	ND	10
Acetophenone	ND	10
N-Nitrosopiperidine	ND	20
2-Nitrophenol	ND	10
2,4-Dimethylphenol	ND	10
Benzoic Acid	ND	50
a,a-Dimethylphenethylamine	ND	10
2,4-Dichlorophenol	ND	10
4-Chloroaniline	ND	20
2,6-Dichlorophenol	ND	10
N-Nitroso-di-n-Butylamine	ND	10
4-Chloro-3-Methylphenol	ND	20
2-Methylnaphthalene	ND	10
1,2,4,5-Tetrachlorobenzene	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
1-Chloronaphthalene	ND	10
2-Nitroaniline	ND	50
3-Nitroaniline	ND	50

SEMIVOLATILE ORGANICS BY EPA METHOD 8270

SAMPLE NO. GW70-110791-B-02
SEMIVOLATILE EXTRACTABLE ORGANIC ANALYSIS CONTINUED

COMPOUNDS	CONCENTRATION (ppb)	DETECTION LIMIT (ppb)
2,4-Dinitrophenol	ND	50
4-Nitrophenol	ND	50
Pentachlorobenzene	ND	10
Dibenzofuran	ND	10
1-Naphthylamine	ND	10
2,3,4,6-Tetrachlorophenol	ND	10
2-Naphthylamine	ND	10
4-Nitroaniline	ND	50
4,6-Dinitro-2-Methylphenol	ND	50
1,2-Diphenylhydrazine	ND	10
Phenacetin	ND	20
4-Aminobiphenyl	ND	20
Pentachlorophenol	ND	50
Pronamide	ND	10
Pentachloronitrobenzene	ND	20
p-Dimethylaminoazobenzene	ND	10
7,12-Dimethylbenz(A)anthracene	ND	10
3-Methylcholanthrene	ND	10
Dibenz(A,J)acridine	ND	10

(Surrogate Standard 4530)	Recovery %
2-Fluorophenol	45
Phenol-d_6	55
Nitrobenzene-d_5	81
2-Fluoro-1, 1-biphenyl	74
2,4,6-Tribromophenol	72
P-Terphenyl-d_{14}	81

WATER POLLUTION CONTROL DIVISION SAMPLE RECORD

NAME: Valley Park

ADDRESS: Baywell St.

LOCATION: Baton Rouge

PERMIT #:

TEAM LEADER: Mike Bradley

SAMPLE NUMBER	Comp	Grab	TIME	DATE	OUTFALL	No. of Containers	Duplicates Retained	Analyses VOA	BNA
GW70110791 - A01		1	0945	11/7/91		2		✓	
" - A02		1	"	"		1			✓
" - A03		1	"	"		1			
" - B01		1	0950	"		2			
" - B02		1	"	"		1			
" - B03		1	"	"		1			
" - C01		1	1000	"		2			
" - C02		1	"	"		1			
" - C03		1	"	"		1			

DUPLICATES ACCEPTED BY:

NAME: SIGNATURE:

CHAIN OF CUSTODY

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
J M Bradley	11/7/91	10:38	Meena H Raol

Aliq	Grabs	Tear
	/	JMB, Ci

RECOMMENDED SAMPLE DISPOSITION: Analyze & Dispose

FINAL SAMPLE DISPOSITION/DATE:

WPC-6 (9/83)

APPENDIX C

VALLEY PARK

PHYSICAL INSPECTION SUMMARY

DECEMBER 6, 1991

CHUCK HANDRICH, P. E.
PROGRAM MANAGER

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF AIR QUALITY
AIR TOXICS DIVISION

VALLEY PARK SCHOOL
INSPECTION SUMMARY

Two inspections were conducted at the Valley Park School. The first on Friday, October 4th, and the second on Friday, November 8th. During the first inspection, twelve individuals from The Department of Environmental Quality, the Department of Health and Human Services and the parish school board were present. During the second inspection all of the groups were represented, but fewer people were present because of potential exposure to disturbed materials.

The first inspection identified the major ventilation systems, the areas which were serviced by those systems, and some cursory information about the complaints that have been raised by building occupants and the operation of building systems. While walking through the building additional information was presented about specific problems in certain rooms and observations were made about likely sampling areas. This initial inspection developed ideas for a more intensive inspection within ducts and ventilation systems.

After questionnaires were completed and evaluated, the second building inspection was scheduled to inspect within enclosed areas. Because of the potential to disturb suspected harmful materials, those participating in the second inspection were limited in number and given protective equipment to wear.

The group first inspected the fan system near the smoking room. Both fresh air supply and return air were not ducted to the inlet side of the fan system. There were drafts within the fan room, but identification of the actual source of the air flow was hard to define. Some air was drawn into the fan room from the smoking room, but we did not bring equipment to estimate the rate at which the air was drawn. It would be advantageous to duct both fresh supply air and the return air to the fan system for better control of air circulation.

A fan unit on the second floor (room 201) which was opened for repairs was inspected instead of opening an operating unit. Chuck Handrich and Betty Atkins entered the fan room to closely inspect the opened fan system. Some damage to the fiberglass insulation was noted which may have been caused by maintenance personnel handling the system. However, frayed edges of the insulation were characteristic of erosion and wear and those edges could contribute fibers into the air stream. Samples were taken of the insulating material and of unknown debris near the cooling coils.

A suspended ceiling was inspected by the group. Surprisingly, little or no debris was discovered in the suspended ceiling area. A return duct plenum was inspected and deposits of dust in a wave-like pattern was found. The dust was sampled and both Chuck Handrich and Batty Atkins complained of noise and/or eye problems after disturbing the dust. The samples were analyzed to contain 1% pollen and 1% mold.

The smoking room, if maintained as a smoking room, should be isolated from the return air ducting system. A fan should be installed that discharges air to the outside at a rate of approximately 60 SCFM for each smoker expected to be in the room at a peak capacity of people expected at any one time. The room will be maintained at a negative pressure relative to the rest of the building. A simpler solution is to have no smoking in the building and smoking outside and downwind of the building.

The ventilation in the bathrooms should be checked. A static vent stack appears to be inadequate to maintain clean air. The bathrooms should have a forced air ventilation system installed to discharge at the rate of approximately 50 SCFM per stall. The fan could be connected to the light switch since few would use the toilets without lights. When in use the bathrooms should be at a negative pressure relative to the rest of the building, it should have a supply air vent, possibly a door ventilation panel, but no return air vent.

The air filters currently being used are the common filters available at any retail store and are used in home ventilation systems. The efficiency of removing particulate is limited and the filters are commonly defined as "30% filters". It is recommended that a search for more efficient filters is started. A more efficient filter should be used in place of the current ones. The most efficient filter, a high efficiency particulate accumulator (HEPA), is efficient to remove 99.99% of particles down to the 0.3 micron size with a one inch pressure drop at design capacity. The one inch of pressure drop may be allowable to install a HEPA filter, but the price of replacement filters is expected to be prohibitive. An alternate filter in the 70% to 90% efficiency range may be more cost effective while removing more of the dust, pollen and mold. Emphasis should be placed on pollen removal.

Although testing of the ventilation system was conducted in February of 1986 to evaluate ventilation system flow rates, it is suspected that modifications to the building or changes in room usage may have changed the air flow distribution, or the air flow distribution needs. The current air flow needs compared to actual air flow supplied must be evaluated. This recommended study should be done after cleaning and installation of added ventilation ducting and fans. The study should be done at the ventilation fan (air supplied), the duct discharges in each room (air distributed), and the return air loading. Included in the air flow investigation should be an evaluation of the amount of fresh air which enters the ventilation system, the changes in air flow when doors are open or closed, and the discharges to the environment caused by the isolated bathrooms and smoking room. The result should be a balanced air flow calculation where supplied air volume equals the returned air and fresh air volumes. The fresh air supplied should equal the volume of air discharged from the isolated areas, if the system is balanced.

The inside of a large supply duct plenum in room 133 was inspected. The air supply plenum had very little dust in the duct, but the vanes used to divert the air out of each vent opening appeared to have minimal impact on the passing air. A redesign of this ducting may ensure better air flow distribution across the entire length of the distribution duct.

General floor and wall sections of several rooms were inspected. The inspectors sniffed and smelled and even crawled on hands and knees while attempting to identify any areas where odors may originate, but no specific areas were identified. There were some general area odors, but no origin of those odors were identified.

GENERAL CONCLUSIONS

The first and most important need is to clean the ventilation ducts to remove any dust, pollen, mold and mildew from the ducts. Samples taken at the return air plenums identified hair, pollen and mold as constituents in the dust on the return duct surfaces. This material, if released, could return to the fan and be redistributed throughout the ventilation system. The supply air plenums did not appear to have as much dust coating the insulation material, but some dust deposits were still noted.

Part of the question of cleaning the ventilation duct system should address the condition and purpose of the fiberglass insulation on the inside of the ducting. The insulation near the fan showed signs of erosion. The eroded fiberglass would enter the ducting and could contribute to particulate contamination in the air. It is recommended that any insulation material be placed on the outside of the ducting rather than the inside, thereby removing any erosion potential. The surface of the fiberglass insulation adds a rough surface for dust and fibers to collect. A clean metal surface would be expected to collect less dust.

The ventilation system with the fan next to the smoking room should have the outside air supply connected to the fan fresh air inlet with a plenum to connect the circular duct to the square fan's fresh air inlet. Currently, that fan draws air from the fan room which can supply air from any source including the smoking room. Additional ducting of <u>all</u> return air lines into the fans would be recommended. Several fans draw air from the fan rooms which creates a problem in monitoring or identifying sources of the supplied air.

Additional ducting work should be directed towards the distribution system. Vanes have been used for redirecting air. However, small vanes in a large duct may have minimal impact on redirecting the air flow. The supply ducting in room 133 should be evaluated for redesign to ensure air is equally discharged across the entire supply duct length. This may require installing diversion ducting inside the existing duct to replace the current vanes.

APPENDIX D

VALLEY PARK ADMINISTRATIVE COMPLEX

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R E P O R T   &   R E C O M M E N D A T I O N S

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OFFICE OF PUBLIC HEALTH
SECTION OF ENVIRONMENTAL EPIDEMIOLOGY

Prepared by: Betty G. Atkins, MPH
Environmental Epidemiologist
February 17, 1992

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY

The Office of Public Health, Section of Environmental Epidemiology (OPH-SEE) joined the Louisiana Department of Environmental Quality (LDEQ) in an investigation of health complaints at the Valley Park Administrative Complex on September 27, 1991. The two primary concerns regarding the cause of the health complaints were: (1) the location of the building atop a former landfill site and (2) complaints about the building environment, particularly issues pertaining to the air flow system.

OPH lent technical assistance for DEQ's strategy for ambient air sampling by consulting authorities regarding chemical testing and by collecting health concerns data from building personnel. Problem areas and health effects were identified. Neurological (primarily headaches), upper respiratory and ocular effects comprised the majority of health complaints of personnel in the building.

OPH investigation and testing revealed a ventilation system grossly in need of cleaning and disinfection, but no environmental microbial health threat was identified. As LDEQ's chemical/toxics sampling results become available, they will be reviewed and analyzed from a health effects perspective, health recommendations made and action taken, if indicated, to protect the public's health.

As a result of two Public Accessibility meetings on December 2, 1991, OPH was able to expand the health effects investigation to the neighborhood surrounding the site. Questions focused upon exposure-related issues, present and historical testing and adverse health effects experienced by the citizens. These are presently being researched and are addressed in the recommendations section of this report.

OPH will (1) present a comprehensive list of recommendations to the EBRP School Board and to appropriate representatives of the City of Baton Rouge, (2) pursue these recommendations to assure remedial action is taken, (3) maintain communication with the Valley Park employees and residents of the surrounding area and (4) research and act upon additional information as it becomes available.

II. INTRODUCTION

OPH OBJECTIVES

The Office of Public Health, Section of Environmental Epidemiology (OPH-SEE) was invited by the Louisiana Department of Environmental Quality (LDEQ) to join an investigation of the Valley Park Administrative Complex in Baton Rouge, East Baton Rouge Parish, Louisiana. The objectives of the OPH investigation are (1) to address the health concerns of the personnel at Valley Park and of the residents surrounding the site, (2) to lend technical assistance to LDEQ in the investigation and (3) to generate recommendations relative to interpretations of the health and sampling data and observations.

SITE DESCRIPTION and HISTORY

The Valley Park Administrative Complex is situated on part of the former Valley Park Landfill site. The landfill comprised a thirty-six acre tract of land and operated between the 1940's and 1963. The northern twenty-three acre section is owned by the East Baton Rouge Parish (EBRP) School Board and includes an administration building, parking lots, sports areas and playground. There is no barrier restricting human access to the ditch which runs along the side of the playground. Approximately 270 personnel occupy the building on a full- or part-time basis and infant, child and adult students participate in learning and testing activities at the Complex.

The EBRP Recreation and Parks Commission and the Baton Rouge City-Parish own parts of the thirteen acres to the south. This area includes a recreation center, adjacent buildings and sports areas. The southeastern end of the landfill rises approximately twenty feet above the level of the yards of the surrounding residents and is separated from them by a ditch. There is no barrier between the residential area and the ditch or southern playground area, with the exception of a gate across the roadway entrance to the landfill. This road, at the southern end of the playground, leads directly onto a public street.

The Valley Park Landfill began operation in the 1940's, first as a backup, then as the City-Parish's primary landfill from 1958 to 1963. There are no records as to types of materials deposited at the site. There is an estimated six- to eight-foot depth of garbage material in the landfill, covered by a two-foot clay cap. In 1964 and 1965 Interstate 10 construction divided the site.

The East Baton Rouge Parish School Board initiated construction of the Valley Park School building in 1966 and it was completed in 1968. The building is supported by wooden pilings at a depth of fifteen feet into pleistocene clay. Valley Park operated as a junior high school from 1968 to 1973, then as a middle school until 1986, at which time it converted to an administrative, testing and adult education center.

Residential construction occurred around the site primarily between 1941 and 1953, with an increase in density of housing from 1953 until 1959. Most buildings around the site are single or multiple family homes, some apartment complexes, churches and small businesses. Residents are primarily black and of middle to lower socioeconomic status. Ages of this population range from elderly homeowners, who have resided in the area for thirty to forty years, to young adults with children and infants.

SAMPLING AND MAINTENANCE HISTORY

In response to health concerns regarding the location of public buildings located atop a former landfill site, sampling of air, water and soil was initiated. A chronological summary of data made available to OPH follows:

The Louisiana Department of Natural Resources (DNR), Hazardous Waste Management Division, examined soil from shallow corings and surface soil, as well as a water and a sludge sample from the ditch, on November 30, 1981. In their report of December 1, 1982, they stated that "none of the analyses showed significant contamination." The effects of the settlement of the landfill under the parking lot and playground were noted. It was proposed that reinspection of the site include more extensive sampling of air, ditch water and sludge, and surface soils in an attempt to better define the contamination and possible sources.

In October, 1982, Louisiana State University submitted a preliminary environmental assessment of samples taken on March 16 and April 28, 1982. In March water samples were taken from six sites along the lateral stream. Soil sediment samples were collected in April after a week of heavy rain; nineteen (19) samples were collected from the east and west banks of the lateral stream bed, adjacent to the site. These were analyzed for seventeen metals, and elevated levels of zinc, cadmium, lead and arsenic were found: Zinc levels range from 300 ug/g at the head of the inactive leachate plume to 55 ug/g; Cadmium 16.0 ug/g from third leachate plume sediment prior to mixing with lateral stream to 2.0 ug/g; Lead 1120 ug/g at the head of the inactive leachate plume to 24 ug/g; Arsenic 53.0 ug/g from third leachate plume sediment prior to mixing with lateral stream to 0.7 ug/g. No information regarding gas generation nor of accumulation of chemicals in topsoil at the site was acquired. It was recommended to study methane and chemicals in playground topsoil, to determine "the impact of leachate plumes on lateral streams and Dawson Creek", to consider capping/grading the site if indicated, to investigate the condition of utility lines to the school building and to consider clean-up of the lateral stream.

Gulf South Research Institute prepared a report on December 21, 1982, which was submitted to DNR. Sampling for semi-volatile organic priority pollutants, pesticides, PCBs and metals resulted in detection of relatively low levels of some metals.

On April 25, 1986, (visit date was also documented as May 12, 1986) Cox, Walker and Associates, Inc., consulting engineers, reported that they were unable to collect air samples to test the presence of total hydrocarbons due to unavailable analytic instrumentation, but this would be possible in the future. A visual inspection was made and it was noted that there had been reworking of the grounds. The inspector noted no odors, damaged vegetation nor chemicals. After summarizing the LSU and Air Quality Division studies of 1982 and the nature of old landfill sites, it was proposed that "it would not be reasonable to expect that chemicals would remain which would pose a health hazard to people on the site."

The EBRP School Board contracted Arch Consulting Services, Inc., to test ambient air of two areas of Valley Park Middle School, Rooms 100 and 104. Samples submitted on June 16, 1988, indicated formaldehyde levels of < 0.1 ppm, below both the American Society of Heating, Refrigeration and Air Conditioning (ASHRAE) ambient guideline of 0.1 ppm and the Threshold Limit Value (TLV) of 1.0 ppm. It was determined that the "findings should not pose any significant problems for employees working in those areas." Recommendations included proposed frequent inspection and maintenance of the central air unit, a designated smoking area and consideration of monitoring for carbon monoxide and carbon dioxide.

On May 15, 1989, Arch Consulting Co., Inc., reported that six visits to the Valley Park Complex were made to monitor ambient air for formaldehyde (Rooms 100 and 104), and carbon monoxide, carbon dioxide and methane (Rooms 100, 104, boiler room, smokers' room, custodians' office, Commons, Room 133, and rooftop near access ladder). It was suggested that test results were "below established guidelines". To be considered was "biological monitoring for bacteria in the ventilation system", a designated smoking area, regular inspection of the central air unit and plugging the drains in the old kitchen area.

In July, 1989, the Maintenance Division of the EBRP School Board "removed, cleaned and re-installed" all air conditioning coils at Valley Park Administrative Complex according to the preventive maintenance schedule. Drains in the former kitchen area were also plugged with cement.

West-Paine Laboratories, contracted by the EBRP School Board, tested the drinking water in Valley Park Administrative Complex on March 30, 1990, for metals, fluorides, nitrates, volatile organics, radiologicals and pesticides/herbicides. In their report of May 15, 1990, none of the above were found greater than normal limits at the time of sampling.

In 1990 and 1991, LeBlanc & Assaf and Associates, Inc., developed plans for and carried out chiller replacement at Valley Park as per EBRP School Board efforts to improve the ventilation system in the building.

An employee representative at Valley Park, submitted results of a health concerns survey to Dr. Bernard Weiss, Superintendent of EBRP Schools, on September 6, 1991. Most frequently reported were neurologic, upper respiratory, ocular and dermatologic symptoms. It was requested that the School Board investigate the etiology of the health problems affecting the employees at the site. Employee proposals included (1) ambient air and solid residue testing for microbials, NO, NO2, and radiologicals, (2) soil sampling for metals, organic volatiles and semi-volatiles, (3) examination and improvement of the heating, ventilation and air conditioning (HVAC) system, (4) communication of results of prior testing, (5) investigation of maintenance responsibility and (6) a follow-through of previous recommendations made in 1982.

OPH INVOLVEMENT

The U.S. Environmental Protection Agency (EPA) requested LDEQ to develop a plan for a site screening investigation for water, soil and air contaminants in the administration building and in the area of the former Valley Park Landfill. When addressing the issue of ambient air sampling, LDEQ requested OPH-SEE to assist in determining (1) the appropriate locations of sampling, (2) the number of samples to be collected and (3) the target compounds for which to sample.

On September 27, 1991, OPH-SEE met with DEQ Inactive and Abandoned Sites (IAS) and Air Quality (AQD) Divisions, EBRP School Board representative, Valley Park administration, maintenance and employee representatives. Technical information from expert sources was presented by SEE and it was determined that OPH-SEE would proceed with an Indoor Air Quality Screening Survey of employees at the Valley Park Complex in order to obtain data to guide the Indoor Air sampling strategy and to assist the SEE investigation of potential health hazards and address citizens' health concerns.

III. INITIAL OPH INVESTIGATION

WALK-THROUGH INSPECTION

On October 4, 1991, OPH met with LDEQ, Valley Park administrative and maintenance personnel and employee representatives for a walk-through inspection of the building. Areas of health concern were noted for future investigation.

INDOOR AIR QUALITY SCREENING SURVEY

The Indoor Air Quality Screening Surveys were conducted at Valley Park on October 7-11 and October 14, 1991. Scheduling all 270 personnel working at the Valley Park Complex, full- or part-time, was attempted. To maintain confidentiality, participation was optional. Those interviewed totaled 170: of these, 167 chose to participate, 3 declined participation [62% participation (of total employees)]. The survey contained questions regarding building complaints, health effects, and some personal health history. The purpose of the survey was to gather screening information, not to perform an epidemiologic study; medical records, therefore, were not examined. [See APPENDIX A]

All results were coded and ranked in order of frequency of reporting by the personnel. Percentages reflect percent of the 167 participants and not of the entire 270+ persons in the building.

Completion of the survey does not preclude further OPH investigation as warranted: OPH remains open to collection and investigation of any additional information which employees feel important to the protection of their health. Recommendations generated for this report are based upon information gathered to date, but work is still in process and relative to follow-up.

RESULTS: [See APPENDIX B]

1. MOST FREQUENT COMPLAINTS - RANKED BY FREQUENCY
   1 - LACK OF AIR CIRCULATION: 122 of 167 persons, or 73%
   2 - TEMPERATURE TOO HOT: 118 of 167 persons, or 71%
   3 - TEMPERATURE TOO COLD: 108 of 167 persons, or 65%
   Temperature extremes were described as associated with seasonal/weather changes and air flow problems.
   Also mentioned were
   ODORS (commonly described as "musty")
   DUST IN THE AIR
   DISTURBING NOISES
   LACK OF CLEANLINESS
   UNSTABLE FLOOR TILES
   RODENTS/ROACHES

MOLD/MILDEW
CONCERN ABOUT POTENTIAL OFF-GASSING FROM PARTICLE BOARD
DETERIORATION/STAINING OF CEILING TILES
POOR LIGHTING
FIRE HAZARDS

2. SPECIFIC AREAS OF CONCERN
65 areas were mentioned:
These included specific offices, bathrooms, hallways, water fountains and general areas; many participants also expressed concern about the entire building.
The areas were coded and ranked by frequency.

THE 5 MOST FREQUENTLY MENTIONED AREAS OF CONCERN, RANKED BY FREQUENCY, INCLUDE:

WATER FOUNTAINS, GENERAL
PARKING LOT
ROOM 120-121
ADULT EDUCATION AREA
ROOM 134 (FILE ROOM)

3. OCCURRENCE OF PROBLEM
Most participants noticed problems ALL DAY (77 persons, or 46%) and
either on a DAILY basis (75 persons, or 45%)
or specifically on MONDAY (16 persons, 10%)
or with WEATHER/SEASONAL CHANGES (24 pers., 14%)

4. MOST FREQUENT PROBLEMS/SYMPTOMS
The participants were asked to describe symptoms experienced at least two times per week, and did not ask him/her to determine whether he/she felt these were related to the building environment.

Most participants complained of one to three symptoms, with the range of complaints between 0 - 8.

The most common complaints were
(1) NEUROLOGICAL COMPLAINTS, primarily HEADACHES but including DIZZINESS, LIGHTHEADEDNESS,etc.
(2) UPPER RESPIRATORY COMPLAINTS such as SINUS CONGESTION, THROAT IRRITATION & RUNNY NOSE
(3) OCULAR COMPLAINTS.

1 - HEADACHES: 97 persons, or 58% of participants
Occasionally this was classified by type, but it is not possible to determine by this screening whether the HEADACHES were of SINUS or VASCULAR (MIGRAINOUS) origin.
2 - SINUS CONGESTION: 69 persons, or 41%

3 - EYE COMPLAINTS (subcategory, including eye irritation, watery eyes, blurred vision, etc.): 59 persons, or 35%

5. SYMPTOMS CLEAR AFTER WORK
For 58 persons, or 35%, symptoms CLEARED within 1 - 8 hrs. after leaving work;
For 24 persons, 14%, they did NOT CLEAR;
For 62 persons, 37%, SOME symptoms cleared up, SOME NOT.

6. OTHER QUESTIONNAIRE ITEMS determined whether persons experienced symptoms elsewhere, whether persons had other health problems, including allergies, occupational exposures, including exposure to equipment/machinery and amount of time spent at Valley Park and direct or indirect exposure to smoke.

The observations and health concerns as noted by the Valley Park personnel in the above questionnaire facilitated determination of ambient air sampling locations for both LDEQ and OPH. Although no acute health threat was determined, suggestions for corrective measures were made in the form of preliminary recommendations at the meeting of November 1, 1991.

It was determined that no remedial clean-up procedures would be performed and no changes made, other than smoking policy, prior to the OPH and LDEQ Indoor Air sampling scheduled for November 18, 1991.

IV. INITIAL OPH RECOMMENDATIONS

SAMPLING RECOMMENDATIONS BASED UPON QUESTIONNAIRE AND WALK-THROUGH OBSERVATIONS

OPH-SEE met again with LDEQ, OPH Sanitarian, Valley Park maintenance, School Board, and employee representatives on November 1, 1991. Recommendations (1) for SAMPLING and (2) with regard to OTHER HEALTH ISSUES were made, based upon observations and results of the survey: [See Appendix B]

A. RECOMMENDED SAMPLING AREAS
   1. WATER FOUNTAIN or one of the kitchen area faucets (Water sample)
   2. File Room/Xerox area
   3. Rm 122 (Former lab; capped drains)
   4. Adult Education area (unstable tiles; air flow)
   5. Rm 120-121 (air flow; original carpeting)
   6. Area in which children presently tested:
      Rm 101 (high risk infants)
      Rm 105 (preschool area)
   7. Area w/ partitioned cubicals: e.g., Rm 205
   8. Area w/ ceiling deterioration: e.g., Rm 123
   9. Second Floor offices: Rms 201, 202
   10. Smoking Room - intake area
   11. Area off Gym: e.g., Rms 135, 136

B. RECOMMENDED SAMPLING TIMES
   1. Monday morning
   2. Late afternoon (AC flow discontinued)
   3. Over week-end/holiday
   4. With weather changes: high humidity/rain
      hot/cold temperature

C. COMPOUND SAMPLING TO BE CONSIDERED
   1. Ten compounds tested in Ambient Air Landfill Testing Program of the California Air Resources Board
   2. EPA protocol for "Full Priority Pollutant Scan"

D. OTHER HEALTH RECOMMENDATIONS
   1. DETERMINE SMOKING POLICY
      Designate smoking outside
   2. RESTRUCTURE PARTITIONS (to maximize air flow)
      Employee restructuring plan for 120-121
   3. CITY INSPECTION RE: VENTILATION STANDARDS
   4. CONTINUOUSLY RUN AIR CONDITIONING
      (Without early afternoon or week-end cut-off)
   5. CITY BUILDING INSPECTION
      To address general building integrity, as well as foundation cracks, parking lot and unstable floor tiles

V. INDOOR AIR SYSTEM EVALUATION

EXAMINATION OF INDOOR AIR SYSTEM

OPH-SEE met with LDEQ, Valley Park maintenance and AC/Heating personnel after working hours on November 8, 1991, to examine more closely the AC/Heating System.

AREAS INSPECTED and OBSERVATIONS/SAMPLES:

Room 204 - Designated smoking room
Observed Intake system; draft of undetermined origin noted.

Room 201 - Nursing Office
Observed system; dirt and fibrous residue noted.
SOLID SAMPLE of RESIDUE was taken by OPH to be evaluated for bacterial/fungal/pollen if possible, (by LDEQ for fiber content.)

Vent next to Room 118
Layer of dust approximately 0.5-1" thick noted coating surfaces.
SOLID SAMPLE of DUST residue was taken by OPH

Rooms 100/101 - Infant/Toddler testing areas
Lack of air flow observed;
Musty odor noted; carpet examined (dirty, but not origin of musty odor).

Room 133 - Adult Education area
Lack of air flow observed;
Inside vents very clean

RESULTS OF RESIDUE SAMPLES

Common molds were found, posing no environmental health threat but indicative of a system in need of appropriate cleaning and disinfecting. [See APPENDICES C & D]

VI. OPH INDOOR AIR SCREENING

INDOOR AIR SCREENING

On November 18, 1991, OPH-SEE and OPH-Sanitarian collected samples according to information obtained and from observations of potential problem areas. This sampling was performed the same day and under the same conditions as LDEQ chemical/toxics sampling.

TYPES OF SAMPLES: (1) PCA = Plate Count Agar
Passive sampling for BACTERIA

(2) SDA = Sabouroud Dextrose Agar
Passive sampling for FUNGI

Passive sampling = Plates were positioned in rooms in areas of maximum air circulation for each room; no draw system employed.

(3) DRY SCRAPINGS also collected for BACTERIAL & FUNGAL sampling

AREAS SAMPLED:
Rms 101, 101 Chalk board, 102 ceiling,103, 104, 105, 105 ceiling, 105 light fixture residue, 105 storage area ceiling, 106, 106 sink cabinet, 106 Chalk board, PBX Operator area, 107, 109, 110, 114A (bathroom), 114, 117, 118, 120-121, 122, 123, 126, 127, 128B, Interior Mail/Copy room, Front bathroom, Front office, 133, 134 File & Copy areas 135A, 136, 201, 202, 204, 205. (TOTAL OF 41 SAMPLES TAKEN FOR BOTH BACTERIAL & FUNGAL).

RESULTS OF OPH INDOOR AIR SCREENING

Both sporulating and non-sporulating species of fungi were found: fungal species identified were all typical soil fungi. This is indicative of an air ventilation system in need of cleaning and disinfection. [See APPENDICES C, D, and E]

Expert sources, such as the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), Occupational Safety and Health Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH) and personal communications with Air Quality experts, were consulted regarding procedures and guidelines for appropriate measures to address clean-up and disinfection of heating, ventilation and air conditioning (HVAC) systems harboring microbial contaminants and these form the basis for recommendations made in the OPH recommendations section.

VII. PUBLIC ACCESSIBILITY MEETINGS

On December 2, 1991, two Accessibility Sessions were hosted by OPH in order to solicit comments from both Valley Park employees and residents of the surrounding area to address questions, health concerns and needs of the community. There were concerns regarding: [See APPENDICES G & H]

Specific health complaints: headaches, feeling hot, upper respiratory problems, sinus infections, asthma, choking, sore throat, shortness of breath, difficulty breathing at night, eye irritation and infection, rash/skin irritation, ring worm; dog's death

Any higher rates of deformed/handicapped children, miscarriage, cancers

Unknown landfill material dumped at the site and at other areas in the community, eg, Walnut Hills Elementary

Specific building complaints: decreased ventilation, odors, no windows, drinking water quality, generally unhealthy environment, hazardous parking lot

Physical neighborhood observations: odors in the morning and after rain, contamination: flooding from ditch into yards, landfill contents surfacing in playground and in yards

DEQ sampling results: air/water/soil sampling

Possibility of additional sampling: at deeper soil levels, after heavy rains, sampling of drinking water in homes

Lack of communication with citizens: historical testing results not shared with community - Greenpeace report, ACORN interviews, LSU sampling

Any cause-effect relationships

Health effects from historical exposures - previous employees and children who attended school

General health risks, unexplained illnesses

Possibility of looking at differences between Valley Park and other areas in work time missed due to illness

Questions were addressed by OPH-SEE, OPH EBRP Sanitarian, LDEQ; those which require further investigation and continued follow-up are addressed in the recommendations and future plans sections.

VIII. EAST BATON ROUGE PARISH HEALTH UNIT: INSPECTIONS AND RECOMMENDATIONS

EAST BATON ROUGE HEALTH UNIT INSPECTIONS

The EBRP Sanitarian met initially with Valley Park Administration to discuss complaints on October 8, 1991. Follow-up visits were made on October 14, 17, 25 and November 18, 1991. Preliminary observations and recommendations include: (1) toys handled by different children should be sprayed with a germicide after each use or discarded; (2) the pre-school program should be relocated or a closer restroom with hot water and diaper changing cabinet provided; (3) all damaged ceiling tile in the building should be replaced; (4) water samples were to be collected from drinking fountains and tested for bacteria (by OPH Sanitarians) [results demonstrated no bacteria found in these samples]; (5) roaches should be eliminated; (6) no cracks in the slab were noted, but areas where pipes come through the slab should be checked; (7) spots on blackboards were noted for future investigation; (8) LDEQ should proceed with evaluation of ambient air.

RECOMMENDATIONS

On November 18, 1991, the Medical Director of the EBRP Health Unit determined that the following items be addressed: [See APPENDIX I]

"1. Thoroughly clean all air conditioning vents and return air vents.
2. Remove the stained sections of ceiling tiles throughout the building.
3. Thoroughly clean all light fixtures throughout the building.
4. Install an exhaust fan in the restroom where deodorizers are present.
5. Unstop the drinking fountains that are inoperable.
6. Clean the ceiling tiles around all air vents."

The EBRP Health Unit staff will perform follow-up on all recommendations made above.

IX. SEE RECOMMENDATIONS

1. There should be thorough and immediate cleaning and disinfection of the entire heating, ventilation and air conditioning (HVAC) system, including interiors of all vents, ductwork, filters and equipment.
   a. No building personnel should be present during the clean-up process.
   b. Those performing the service should wear protective clothing at all times, eg, respirators gauged to protect them from inhalation of particulates, goggles, gloves and full-body suits.
   c. Adequate ventilation should be provided during this work to dilute airborne contaminants.
   d. Adequate ventilation should be provided prior to reoccupancy to insure sufficient dilution of airborne contaminants and disinfectant materials.

2. Etiology of ceiling leaks should be identified and subsequent repairs made.
   a. Clean-up/disinfection and repair of all areas where water collection or absorption by porous materials has occurred.
   b. After repair, replacement of all damaged ceiling tiles.
   c. After repair, replacement of all mildewed carpeting.
   d. After repair, replacement of any other water-damaged building materials.

3. Office partitions should be restructured to maximize air flow, eg, as in employees' restructuring plan for Office 120-121.

4. Indoor Air relative humidity should be maintained below 60%, 50% where cold surfaces are in contact with room air. (as per OSHA) HVAC system changes should be implemented as per LDEQ recommendations.
   Until engineering changes can be implemented, it is recommended that the HVAC system maintain continuous air flow at all times during which the building is occupied. If air flow is discontinued over the week-end, it should be reinitiated no fewer than two hours prior to occupancy.

5. Air intake/distribution and pressure differential problems should be corrected as per LDEQ determinations.

6. A preventive maintenance follow-up protocol for regular cleaning/disinfection of the HVAC system should be established, including regular inspection for chemical and microbial contamination (In conjunction with LDEQ determination).

7. Carpeting, such as that in Room 120/121, in areas in which old carpeting poses a physical hazard should be replaced.

8. A NO SMOKING policy should be established.

9. General building integrity should be investigated by a City authorized or licensed building inspector.

10. The parking lot should be immediately leveled and repairs should be performed on the lot and any areas of walkway access to the building which pose a physical hazard.

11. Additional health recommendations may be made based on subsequent chemical/toxics findings by LDEQ testing.

12. Any drainage inadequacies of canal and ditch along perimeter of former landfill site should be immediately investigated and corrected by the appropriate City-Parish department.

13. Residents surrounding the site who would like their water or paint tested for heavy metals, eg, lead, may contact the office of Greg Moy, Sanitarian Parish Manager, EBRP Health Unit, 342-1734.

14. It is recommended that the parents of children complaining of rash/ringworm/skin infections after exposure to playground over the landfill site assist their children in maintaining appropriate hygiene to help control these problems. They should also request that their physicians contact Betty Atkins, OPH-SEE, (504) 568-7055 or Greg Moy, OPH Health Unit, 342-1734, with reports of dermatologic irritations as a result of exposure to the site.
Citizens reporting individually should include a description of the irritation, when it occurred and the area of the playground to which the child was exposed. If a problem area is identified, it can be treated by the local Health Unit to control infection.

X. OPH PLANS FOR FUTURE ACTION

1. Present written recommendations to the EBRP School Board, City of Baton Rouge, and other OPH offices, as indicated above. SEE will be available to explain results and recommendations as requested.

2. Maintain communication with employees/community to facilitate follow-up of non-enforceable recommendations:
   - Accessibility Sessions, as per request
   - Smaller Employee/Community Representative meetings with OPH representative, as per request
   - Continue Newsletters developed jointly by LDEQ-OPH [See APPENDIX F]
   - Respond to individual questions/concerns:
     Return telephone calls within 24 hours:
     Betty Atkins, OPH: (504) 568-7055
     New Orleans, LA 568-8537

     Tammy Guillotte, LDEQ: 765-0487
     Baton Rouge, LA
   - Facilitate follow-up of recommendations through contact with appropriate community offices

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Acknowledgements:
Also consulted were LDEQ staff, reports and sampling results, ATSDR Toxicological Profiles, TOXNET data, and historical sampling data and records as cited in the text of this report.

Report reviewed by: Raoult Ratard, MD, MPH, Director
Division of Chronic Disease

Dianne Dugas, MSW, MPH, Director
Section of Environmental Epidemiology

A P P E N D I C E S

APPENDIX A

INDOOR AIR QUALITY SCREENING QUESTIONNAIRE
for Valley Park School Complex
Dept of Environmental Epidemiology, OPH, New Orleans, LA

This questionnaire is designed for environmental sampling and health screening purposes only; it is not part of a formal epidemiologic study. We will not be verifying the reported health effects with medical records.

Your participation or refusal to participate in this screening will be kept confidential.

Would you like to participate? YES ____ NO ____

Your name (optional) ______________________________

(ASSIGN CONFIDENTIAL ID NUMBER)

Can you be contacted for further questions if necessary?

YES ___ NO ___ Telephone: ______________________________

Best time: ______________________________

1. Complaints YES ____ NO ____ (If yes, please check:)
   ____ temperature too cold
   ____ temperature too hot
   ____ lack of air circulation (stuffy feeling)
   ____ noticeable odors
   ____ dust in the air
   ____ disturbing noises
   ____ other (specify)

2. Are there any areas of the building in which you specifically notice these problems? (please list)
   ____
   ____

3. When do these problems occur?
   ____ morning
   ____ afternoon
   ____ all day
   ____ no noticeable trend
   ____ daily
   ____ specific day(s) of week
   which day(s) ______________

4. HEALTH PROBLEMS OR SYMPTOMS: Describe in three words or fewer each symptom or adverse health effect you experience more than two times per week. (EXAMPLE: runny nose)
   Symptom #1 ______________________________
   Symptom #2 ______________________________
   Symptom #3 ______________________________
   Symptom #4 ______________________________
   Symptom #5 ______________________________
   Symptom #6 ______________________________

   Do the above symptoms clear up after leaving work?
   YES ____ NO ____
   If yes, how long after leaving work? ______________

   If no, which symptom or symptoms persist (noted at home or at work) throughout the week? (Circle the number below)
   Symptom: #1 #2 #3 #4 #5 #6

Do you have these symptoms anywhere else (other than at work)?
YES ____ NO ____
Do you have any health problems or allergies which have any of the above symptoms? YES ____ NO ____
If yes, please describe. ________________________________

5. Do any of the following apply to you? (Check those applicable)
____ wear contact lenses
____ operate video display terminals at least 10% of work day
____ operate photocopier machine at least 10% of work day
____ use or operate special office machines or equipment (specify) ________________________________

6. Do you smoke? YES ____ NO ____ If yes, packs/day ________

6a. Are you currently taking any medications ? (Perscribed / Non-perscribed) YES ____ NO ______ If yes, what kind ________ ____________, How long __________ ?

6b. Do you have allergies? YES _____ NO _____ . If yes specify.
____

7. Do others in your immediate work area smoke? YES ____ NO ____

8. Your office or suite number is ________________

9. In which area(s) of the building do you spend the majority of time at work? ________________________________

10. What is your job title or position? ________________

11. Briefly describe your job tasks ________________
____

12. How many hours per week are spent at your job? ________

13. How long have you been working in this building? ________

14. Do you have another job (NOT at Valley Park)? YES ___ NO ____
What is your job title or position at this job? ________

Briefly describe your primary job tasks ________________
____

15. Can you offer any other comments or observations concerning your office environment at Valley Park? (optional)
____
____
____

16. Can you offer suggestions as to how OPH can best provide you and your co-workers with information (public meeting, employee committee meeting, contact with employee representative, etc.)
____

Thank you for your participation!

APPENDIX B

VALLEY PARK COMPLEX INVESTIGATION

PRELIMINARY REPORT

Department of Health and Hospitals

Office of Public Health

Section of Environmental Epidemiology

Betty Atkins
November 1, 1991

TABLE OF CONTENTS

VALLEY PARK COMPLEX
(Preliminary Report)

I. INDOOR AIR QUALITY SCREENING QUESTIONNAIRE

1. PARTICIPATION

Of the 270+ personnel at the Valley Park School Complex 170 were interviewed: 167 participated, 3 declined participation.

2. COMPLAINTS (Questionnaire #1)

A. Frequencies of complaints (ranked, by actual number) include:

LACK OF AIR CIRCULATION	122
TEMPERATURE TOO HOT	118
TEMPERATURE TOO COLD	108
NOTICEABLE ODORS	81
DUST IN AIR	70
DISTURBING NOISES	18

Participants describe TEMPERATURE extremes related to (1) seasonal/weather changes and (2) air flow/circulation problems. ODORS were most commonly described as "musty" and in reference to rooms in which there is original carpeting or residue on vents.

B. Addititonal complaints include concerns about

LACK OF CLEANLINESS	21
FLOOR TILES (UNSTABLE)	20
RODENTS/ROACHES	20
MOLD/MILDEW	14
PARTICLE BOARD (OFF-GASSING?)	7
CEILING TILES (DETERIORATION/LEAKS)	7
POOR LIGHTING	1
FIRE HAZARDS	1

3. AREAS OF CONCERN (#2, #15)

Frequencies of specific areas mentionned may be low due to (1) the large number of areas mentionned (#65) and (2) the frequency of the "all over" response by which participants expressed concerns but did not associate these with any specified area. Thus, if an area demonstrated low frequency, this does not preclude a potential sampling area.

Also to note: of areas which have been subdivided may similarly present higher frequencies.

CODED AREAS (Coded areas 100-299 represent office numbers of the same code, unless otherwise specified.)	FREQUENCY
509 (Water fountains, general)	30
706 (Parking lot)	22
120 (Room 120-121 combined)	18
197 (Adult Educ, Testing area)	17
189 (File Room 134)	15
133 (Adult Educ, gen'l)	12
199 (Adult Educ, Reading area)	11
107	10
705 (Upstairs)	9
201	8
110	7
198 (Adult Educ, Math/Lang area)	7
202	7
310 (Bathrooms, gen'l)	7
701 (Hallway/Wing, Rms 100-106)	6
703 (Hallway/Wing, Rms 114-120)	6
104	5
105	5
109	5
178 (Gym area)	5
303 (Women's Bathroom next to 114)	5
702 (Hallway/Wing, Rms 107-113)	5
118	4
123	4
704 (Hallway/Wing, Rms 121-127	4

106		3
114		3
117		3
122		3
136		3
200 (Commons area, gen'l)		3
709 (Hallways, gen'l)		3

102	128 A&B	Frequency = 2
103	135 (VIPS)	
108	137 (Lounge off Gym)	
112	302 (Women's Bathroom, near front entrance)	
113	399 (Bathrooms in Adult Educ)	
116	503 (Water Fountain, Wing 114-120)	
119	504 (Water Fountain, Wing 121-127)	
126	508 (Water Fountains, near Audiometric)	
127	710 (Stairwell to Second Floor)	

101	204 (Smoking Room)	Frequency = 1
111	298 (Commons - near Main Entrance)	
124	502 (Water Fountain, Wing 107-113)	
131	707 ("Storage Room")	
148B	708 ("Equipment Room")	
188 (Xerox section of File Room, specified)		

4. WHEN DO PROBLEMS OCCUR (#3)

ALL DAY	77
NO NOTICEABLE TREND	24
AFTERNOON	20
MORNING	18
SOMETIMES MORNING/SOMETIMES AFTERNOON	5

5. OCCUR DAILY (#3)

YES	75
INTERMITTENT/PERIODIC	7

6. OCCUR SPECIFIC DAY

CHANGES W/ SEASON/WEATHER	24
MONDAY	16
THURSDAY	4
TUESDAY	1
FRIDAY	1

6. HEALTH PROBLEMS OR SYMPTOMS (#4, MEDS #6A)

Range: 10-61   0 = NO SYMPTOMS

SYMPTOM	FREQUENCY
HEADACHES	97
SINUS CONGESTION	69
SUBCATEGORY: OCULAR COMPLAINTS (21-27) (Persons w/ at least one eye complaint)	59
RUNNY NOSE/SINUS DRAINAGE	27
THROAT IRRITATION/SORENESS/HOARSENESS	24
FATIGUE	23
BURNING EYES	22
EYE TEARING/WATERING	21
EYE IRRITATION/ITCHING/SWELLING	20
DIZZINESS/LIGHTHEADEDNESS	17
SNEEZING	14
SINUS INFECTIONS/INFLAMMATION	14
WEAK OR BLURRED VISION/DOUBLE VISION	9
COUGH	8
EAR CONGESTION/ACHE	7
MEMORY LOSS	6

NAUSEA — Frequency = 5
ITCHING/RASH - GENERAL BODY
FACIAL RASH/IRRITATION

ABNORMAL EQUILIBRIUM (BALANCE) — Frequency = 4
DROWSINESS
SHORTNESS OF BREATH/HYPO-HYPER VENTILATION

EYE INFECTIONS — Frequency = 3
GEN'L MALAISE
DRY MOUTH
FEVERS
JOINT STIFFNESS

NOSE BLEED — Frequency = 2
VISION LOSS
CONFUSION/DISORIENTATION
DIARRHEA
CHEST PAIN
EPIDERMAL PIGMENTATION CHANGES

RINGING OF EARS — Frequency = 1
BLOOD IN SPUTUM
NYSTAGMUS
GEN'L WEAKNESS
NUMBNESS/TINGLING
DEPRESSION
IRRITABLE BOWEL
TACHYCARDIA

Cont.

"HOT FLASHES"	Frequency = 1
URINARY URGENCY	
BLOOD IN URINE	
SARCOIDOSIS	
BACK PAIN	
PAIN IN EXTREMITIES	
FIBROMYALGIA	
"MUSCLE TISSUE BREAKDOWN"	
SWOLLEN GLANDS	
URINARY TRACT INFECTIONS	
GASTROINTESTINAL COMPLAINTS, GEN'L	

HEADACHE, the most frequent health effect, was occasionally classified by type, but it is not possible via this screening to determine whether the etiologies are of sinus or vascular (e.g., migrainous) origins. Twelve (12) participants indicated taking medications associated with VASCULAR CONTROL (Beta-Blockers, Alpha-Adrenergic Blockers, Calcium Channel Blockers) and thirty (30) take ANALGESICS (for pain).

Fifty-one (51) participants are taking DECONGESTANTS, EXPECTORANTS, ANTIHISTAMINES (related to Upper Respiratory complaints).

7. SYMPTOMS CLEAR UP AFTER LEAVING WORK (#4)

SOME CLEAR UP/SOME NOT	62
CLEAR UP (usually w/in 1-8 hrs)	58
DO NOT CLEAR	24
UNDETERMINED	3

8. SYMPTOMS OCCUR ELSEWHERE (#4)

OCCUR ELSEWHERE	75
DO NOT OCCUR ELSEWHERE	59
SOMETIMES DO/DON'T OCCUR ELSEWHERE	2

9. OTHER HEALTH PROBLEMS INCLUDING ALLERGIES (#4, #6B)

OTHER PROB/ALLERGIES	70
NO OTHER PROB/ALLERGIES	79

10. EXPOSURES WHICH APPLY (#5)

VIDEO DISPLAY TERMINALS (& COMPUTERS)	43
WEARS CONTACT LENSES	34
USES PHOTOCOPIER	16
OTHER (Audiometric equipment, etc.)	10

11. DO YOU SMOKE (#6)

DOES NOT SMOKE	146
SMOKES	18

12. OTHERS IN WORK AREA SMOKE (#7)

OTHERS DO NOT SMOKE	128
OTHERS SMOKE	18
OTHERS SMOKE, BUT NOT IN WK AREA	17

13. HOURS PER WEEK AT VALLEY PARK SITE (#12)

FEWER THAN 8 HRS	8
8 - 16 HRS	32
17 - 24 HRS	23
25 - 32 HRS	13
33 - 39 HRS	18
40+ HRS	70

14. HOW LONG WORKING AT VALLEY PARK (in months) (#13)

0 - 6 MONTHS	12
7 - 12 MOS	9
13 - 24 MOS	22
25 - 36 MOS	21
37 - 48 MOS	58
MORE THAN 48 MOS	42

15. ANOTHER JOB/WORK LOCATION (Includes experience at other sites/schools) (#14)

NO OTHER LOCATION	100
OTHER JOB OR OTHER WORK LOCATION	65

II. SAMPLING RECOMMENDATIONS BASED UPON QUESTIONNAIRE AND WALK-THROUGH OBSERVATIONS

A. RECOMMENDED SAMPLING AREAS

1. WATER FOUNTAIN or one of the kitchen area faucets (Water sample)
2. File Room/Xerox area
3. 122 (Former lab; capped drains)
4. Adult Education area (unstable tiles; air flow)
5. 120-121 (air flow; original carpeting)
6. Area in which children presently tested:
   101 (high risk infants)
   105 (preschool area)
7. Area w/ partitioned cubicals: e.g., 205
8. Area w/ ceiling deterioration: e.g., 123
9. Second Floor offices: 201, 202
10. Smoking Room - intake area
11. Area off Gym: e.g., 135, 136

B. RECOMMENDED SAMPLING TIMES

1. Monday morning
2. Late afternoon (AC flow discontinued)
3. Over week-end/holiday
4. With weather changes: high humidity/rain
   hot/cold temperature

C. COMPOUND SAMPLING TO BE CONSIDERED

1. Ten compounds tested in Ambient Air Landfill Testing Program of the California Air Resources Board
2. EPA protocol for "Full Priority Pollutant Scan"

III. OTHER HEALTH RECOMMENDATIONS

1. DETERMINE SMOKING POLICY

   Designate smoking outside

2. RESTRUCTURE PARTITIONS (to maximize air flow)

   Employee restructuring plan for 120-121

3. CITY INSPECTION RE: VENTILATION STANDARDS

4. CONTINUOUSLY RUN AIR CONDITIONING
   (Without early afternoon or week-end cut-off)

5. CITY BUILDING INSPECTION

   To address general building integrity, as well as foundation cracks, parking lot and unstable floor tiles

IV. IMMEDIATE PLANS FOR OPH CONTINUED FOLLOW-UP

1. Continue preparation of SYMPTOM by AREA OF CONCERN correlation matrix from information provided on personnel questionnaires.

   Compare these data to sampling results for potential link with health effects.

2. Research OPH BACTERIAL/MOLD/MILDEW/FUNGAL sampling procedures (Contact Chemical Analyst, Microbiology Lab

3. Examine Water Analysis from EBRP Water Works and request recommendations for sampling suggestions (Lead, etc.)

4. Pursue request for Hartford, Connecticut data (Unpublished test results of Ambient Air evaluation of school building on landfill)

5. Obtain and review reports from the City of Baton Rouge and from Region II Sanitarians

6. Engineering: pursue Building Inspection

7. Community Communication/Involvement:

   Work w/ Karen Baiamonti (DEQ) in preparation of Newsletters for Valley Park personnel

   Employee Representative Committee - meeting development

   Plan Public Meeting(s) - to include Valley Park Complex personnel and members of surrounding community

STATE OF LOUISIANA
DEPARTMENT OF HEALTH AND HOSPITALS

LOUISIANA
Department of HEALTH and HOSPITALS

Buddy Roemer
GOVERNOR

David L. Ramsey
SECRETARY

APPENDIX C

RE: VALLEY PARK ADMINISTRATIVE COMPLEX
BACTERIAL/FUNGAL SAMPLING
11/8/91 and 11/18/91

11/8/91

Two (2) solid samples of residue were collected, sealed in plastic bags and taken to Wayne Dupree, Microbiologist, OPH Microbiology Lab, New Orleans, on 11/12/91.

11/15/91

PCA and SDA medium plates were obtained from the Microbiology Lab:

PCA = Plate Count Agar = medium for bacteria
SDA = Sabouroud Dextrose Agar ("Sab Dex Agar") = medium for molds

Each plate was numbered and labeled as to type of medium prior to exposure. All plates were refrigerated until time of exposure on 11/18/91, as per protocol.

11/18/91

Forty-one (41) plate samples of each PCA and SDA were collected (See SAMPLE IDENTIFICATION RECORD attached).
Each plate (PCA 1-40, inclusive, and PCA 42 and SDA 1-41, inclusive) was exposed to ambient air for a minimum of fifteen (15) minutes, EXCEPT for

1. PCA 10 and SDA 10, which were used to collect scraping samples from the chalk board in Room 106
2. PCA 14 and SDA 14, which were discarded due to accidental contamination during exposure
3. PCA 43-53 and SDA 42-53, which were returned to the lab unexposed.

After exposure, all plates were closed, individually sealed in plastic bags, stocked upside down and maintained at room temperature as per protocol. They were returned to the Microbiology Lab in New Orleans 11/18/91 for analysis.

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12/2/91

OPH/SEE received the Microbiologist's environmental sampling analysis of

1. the two (2) solid samples obtained during the 11/8/91 inspection, and
2. the five (5) solid and eighty-two (82) cultured samples collected on 11/18/91.
   (See attached)

12/3/91 & 12/4/91

Wayne Dupree, Microbiologist, was contacted for verbal impressions/explanations of results:

RE: FUNGAL SAMPLES

1. Fungi are identified by the ways by which they sporilate (produce spores). _Mycelia_ _sterilia_ is a term used for fungi not sporilating; these were not identifiable.

2. The other fungal species identified are all typical soil fungi and do not pose a serious health threat:
   - _Cladosporium_ _species_ _(sp.)_
   - _Penicillium_ _sp._
   - _Aspergillus_ _sp._
   - _Curvularia_ _sp._
   - _Chaetomium_ _sp._
   - _Paecilomyces_ _sp._
   - _Drechslera_ _sp._

RE: BACTERIAL SAMPLES

3. As per protocol, only colony counts were performed on the PCA plates; specific bacteria were not identified. It is difficult to determine specific bacterial types, but further investigation is possible. Mr. Dupree has requested information regarding methods and criteria for spot testing and this will provide guidance should further testing be indicated.

APPENDIX D

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DEPARTMENT OF HEALTH AND HOSPITALS

Buddy Roemer
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Department of
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David L. Ramsey
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Report on environmental samples submitted by Betty Atkins of Environmental Epidemiology on 11-12-91 and 11-18-91.

Sample	Microscopic Exam	Culture
11/12 Sample #1 Room #201	Debris + rare *Curvularia* and *Drechslera* spores	1 colony - *Cladosporium*
Sample #2 Hallway Vent next to Room 118	Debris + rare *Curvularia* and *Drechslera* spores.	1 colony - *Curvularia*
11/18 105 Ceiling tile	Debris	No Growth
105 storage ceiling	Debris + few fungal elements	Confluent Growth - *Cladosporium*
106 blackboard	Debris	No Growth
105 light fixture	Debris	1 colony - *Cladosporium*
102 ceiling	Debris	No Growth

Reported 11-26-91 by Wayne Dupree

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325 LOYOLA AVENUE • ROOM 709 • NEW ORLEANS, LOUISIANA 70112
PHONE - 504 568-5373 • LINC - 621-5373 • FAX# 504 568-5393

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Report on microbial density plates submitted by Betty Atkins of Environmental Epidemiology on 11-18-91. See following 3 pages for actual colony counts by plate. Sab Dex Agar plates are molds and Plate Count Agar plates are bacteria. Examination of molds isolated showed a mixture of typical soil/contaminant type fungi. Approximately 70% Cladosporium sp., 10% Penicillium sp., 10% Aspergillus sp., 5% Curvularia sp. The remaining were a mixture of Chaetomium sp., Paecilomyces sp., and several Mycelia Sterilia.

Reported 11-26-91 by Wayne Dupree

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Plate	Sab Dex Agar	Plate Count Agar
1	4 colonies	1 colony
2	No Growth	No Growth
3	1 colony	No Growth
4	11 colonies	3 colonies
5	No Growth	3 colonies
6	No Growth	6 colonies
7	No Growth	2 colonies
8	No Growth	2 colonies
9	1 colony	No Growth
10	1 colony	2 colonies
11	No Growth	1 Colony
12	No Growth	No Growth
13	No Growth	No Growth
14	No Plates Submitted	⟶
15	4 colonies	3 colonies
16	1 Colonies	No Growth
17	No Growth	4 colonies
18	1 colony	1 colony
19	2 colonies	1 colony
20	1 Colony	13 colonies

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Plate	Sab Dex Agar	Plate Count Agar
21	2 colonies	No Growth
22	1 colony	No Growth
23	No Growth	No Growth
24	No Growth	No Growth
25	1 colony	No Growth
26	No Growth	5 colonies
27	1 colony	No Growth
28	5 colonies	3 colonies
29	2 colonies	1 colony
30	1 colony	No Growth
31	2 colonies	5 colonies
32	8 colonies	14 colonies
33	5 colonies	11 colonies
34	19 colonies	8 colonies
35	2 colonies	3 colonies
36	2 colonies	2 colonies
37	6 colonies	1 colony
38	12 colonies	4 colonies
39	6 colonies	2 colonies
40	1 colony	11 colonies

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Plate	Sab Dex Agar	Plate Count Agar
41	1 colony	7 colonies
42	1 colony	6 colonies
43	3 colonies	No Growth
44	No Growth	No Growth
45	No Growth	No Growth
46	No Growth	No Growth
47	No Growth	No Growth
48	No Growth	No Growth
49	No Growth	No Growth
50	No Growth	1 colony
51	1 colony	No Growth
52	No Growth	No Growth
53	No Growth	No Growth

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VALLEY PARK ADMINISTRATIVE COMPLEX
AMBIENT AIR SAMPLING : 11/18/91

APPENDIX E

PLATE COUNT AGAR (PCA) = FOR BACTERIAL COLONY COUNT

SAMPLE IDENTIFICATION RECORD

PCA/ SDA	TIME BEGIN	TIME END	ROOM NO.	LOCATION SPECIFICS & SAMPLE NOTES/OBSERVATIONS
PCA01	0905	0922	107	BLOW AREA
PCA02	0907	0922	109	
PCA03	0909	0924	110	
PCA04	0911	0925		PBX OPERATOR RM, NEAR HALL 100-106
PCA05	0913	0928	103	
PCA06	0914	0937	104	
PCA07	0915	0932	105	
PCA08	0920	0937	106	
PCA09	0937	0955	106	SINK CABINET IN STORAGE CLOSET
PCA10	0945	0945	106	SCRAPING OF CHALK BOARD: SOLID
PCA11	1003	1035	101	
PCA12	1004	1035	101	CUBICAL AREA
PCA13	1115	1135	102	
PCA14	1120	X		CONTAMINATED: NOT USED
PCA15	1125	1155	114	
PCA16	1128	1155	117	
PCA17	1130	1156	118	
PCA18	1132	1159	120	(SAMPLES FROM EA. SIDE 120/121)
PCA19	1132	1159	121	
PCA20	1140	1200	114A	WOMEN'S BATHROOM
PCA21	1140	1202	127	
PCA22	1142	1203	126	

PCA/ SDA	TIME BEGIN	TIME END	ROOM NO.	LOCATION SPECIFICS & SAMPLE NOTES/OBSERVATIONS
PCA23	1145	1205	122	
PCA24	1207	1220	123	
PCA25	1210	1235	126B	
PCA26	1212	1240		MAIL/COPY ROOM, INTERIOR
PCA27	1217	1240	135A	ACADEMIC DISTINC. OFFICE
PCA28	1219	1241	136	REDESIGN OFFICE
PCA29	1229	1240	204	SMOKING ROOM
PCA30	1222	1240	205	
PCA31	1245	1310	133	READING AREA OF 133, ADULT ED.
PCA32	1245	1310	133	MATH/LANGUAGE AREA
PCA33	1245	1310	133	CENTRAL OFFICE AREA
PCA34	1250	1314		JANITOR'S CLOSET OFF HALL TO 134
PCA35	1251	1315	134	XEROX AREA
PCA36	1251	1315	134	FILE ROOM
PCA37	1255	1317	202	
PCA38	1258	1320	201	
PCA39	1300	1320	201	INSIDE VENT INTAKE CLOSET
PCA40	1310	1323		WOMEN'S BATHROOM BY FRONT ENTRANCE
PCA41				NOT USED
PCA42	1312	1330		FRONT CENTRAL OFFICE (M.GORDON'S)
				PCA43-PCA53, INCLUSIVE, NOT USED

VALLEY PARK ADMINISTRATIVE COMPLEX
AMBIENT AIR SAMPLING : 11/18/91

SABOUROUD DEXTROSE AGAR (SDA) = FOR FUNGAL IDENTIFICATION

SAMPLE IDENTIFICATION RECORD

PCA/ SDA	TIME BEGIN	TIME END	ROOM NO.	LOCATION SPECIFICS & SAMPLE NOTES/OBSERVATIONS
SDA01	0905	0922	107	BLOW AREA
SDA02	0907	0922	109	
SDA03	0909	0924	110	
SDA04	0911	0925		PBX OPERATOR RM, NEAR HALL 100-106
SDA05	0913	0928	103	
SDA06	0914	0937	104	
SDA07	0915	0932	105	
SDA08	0920	0937	106	
SDA09	0937	0955	106	SINK CABINET IN STORAGE CLOSET
SDA10	0945	0945	106	SCRAPING OF CHALK BOARD: SOLID
SDA11	1003	1035	101	
SDA12	1004	1035	101	CUBICAL AREA
SDA13	1115	1135	102	
SDA14	1120	X		CONTAMINATED: NOT USED
SDA15	1125	1155	114	
SDA16	1128	1155	117	
SDA17	1130	1156	118	
SDA18	1132	1159	120	(SAMPLES FROM EA. SIDE 120/121)
SDA19	1132	1159	121	
SDA20	1140	1200	114A	WOMEN'S BATHROOM
SDA21	1140	1202	127	
SDA22	1142	1203	126	

PCA/ SDA	TIME BEGIN	TIME END	ROOM NO.	LOCATION SPECIFICS & SAMPLE NOTES/OBSERVATIONS
SDA23	1145	1205	122	
SDA24	1207	1220	123	
SDA25	1210	1235	128B	
SDA26	1212	1240		MAIL/COPY ROOM, INTERIOR
SDA27	1217	1240	135A	ACADEMIC DISTINC. OFFICE
SDA28	1219	1241	136	REDESIGN OFFICE
SDA29	1229	1240	204	SMOKING ROOM
SDA30	1222	1240	205	
SDA31	1245	1310	133	READING AREA OF 133, ADULT ED.
SDA32	1245	1310	133	MATH/LANGUAGE AREA
SDA33	1245	1310	133	CENTRAL OFFICE AREA
SDA34	1250	1314		JANITOR'S CLOSET OFF HALL TO 134
SDA35	1251	1315	134	XEROX AREA
SDA36	1251	1315	134	FILE ROOM
SDA37	1255	1317	202	
SDA38	1258	1320	201	
SDA39	1300	1320	201	INSIDE VENT INTAKE CLOSET
SDA40	1310	1323		WOMEN'S BATHROOM BY FRONT ENTRANCE
SDA41	1312	1330		FRONT CENTRAL OFFICE (M.GORDON'S)
				SDA42-SDA43, INCLUSIVE, NOT USED

VALLEY PARK ADMINISTRATIVE CENTER
NOVEMBER 1991

Department of Environmental Quality

LOUISIANA
Department of HEALTH and HOSPITALS

ABOUT THIS NEWSLETTER

This is the first in a series of newsletters designed to keep you informed about environmental and health investigations underway at the Valley Park Administrative Center. Developed jointly by the Department of Environmental Quality (DEQ) and the Department of Health and Hospitals (DHH), the newsletters will be distributed by the East Baton Rouge Parish School Board to all employees of the building.

BACKGROUND

DEQ, in cooperation with the United States Environmental Protection Agency (EPA), is currently investigating the site of the Valley Park Landfill. The landfill, operating from the 1940's to 1963, covered a 36-acre tract of land that includes the site of the Valley Park Administrative Center.

Aware of the health concerns of the Center's employees, DEQ requested technical assistance from DHH in developing a comprehensive sampling plan for the building.

STATUS

<u>Landfill Investigation</u>

In an effort to discover any environmental problems posed by the old landfill, DEQ staff collected a number of soil and water samples from the site in mid-October, 1991. It will be approximately four (4) months from that time until analytical results are received. Then DEQ will review the data to determine what, if any, further action needs to be taken.

<u>Building Investigation</u>

In October 1991, environmental epidemiologists from DHH spent several days at the Valley Park Administrative Center, observing building conditions and interviewing employees who wished to complete the indoor air quality screening questionnaire. 167 of the 270 employees, or 61%, participated in the survey. Based on both the questionnaire results and agency observations, DHH made several recommendations to DEQ at a November 1, 1991 meeting:

(1) Indoor air sampling: specifying target compounds, locations, times
(2) Establishment of smoking policy
(3) Restructuring partitions
(4) City inspection of building, especially the ventilation system
(5) Running air conditioning continuously

In early November, DEQ collected water samples from water fountains and a kitchen in the building. Chemical and bacterial data on these samples will be available in approximately 6 weeks.

FUTURE PLANS

On November 8, 1991, DEQ and DHH jointly examined the air conditioning/heating system. Later in the month, DEQ plans to collect air samples for chemical analysis; DHH will sample for mold, mildew, fungi, and bacteria. DEQ and DHH will evaluate the data and provide the results, conclusions, and recommendations to the public.

In addition, DHH will conduct public meetings on Monday, December 2, 1991, at 3:30 p.m. and 6:00 p.m., Room 206, Valley Park Administrative Center, to discuss site-related health concerns of building employees and citizens in the neighborhood.

ADDITIONAL INFORMATION

If you would like additional information, please call Betty Atkins, DHH/OPH/SEE, at (504) 568-8537, or Karen Balamonte, DEQ/IASD at (504) 765-0487.

Printed on recycled paper

APPENDIX G

Re: VALLEY PARK ADMINISTRATIVE CENTER
ACCESSIBILITY SESSION, DECEMBER 2, 1991

The employees of Valley Park and residents of the surrounding area were invited by OPH to accessibility sessions held at the Center on December 2, 1991. The primary goal of the meetings is to provide an opportunity for citizens to voice concerns and ask questions about the site. Newsletters and additional meetings will keep the employees and citizens of the area informed as to progress of environmental and health investigations.

Aware of the health concerns of the employees at the Center, DEQ requested technical assistance from the Department of Health and Hospitals (DHH) - Office of Public Health (OPH) in developing a comprehensive Indoor Air sampling plan for the building. They specifically requested OPH input as to target compounds, locations, times and numbers of samples to be taken.

OPH devised an Indoor Air Quality Screening Questionnaire for all building personnel. There are approximately 270 employees at the site; 170 came for interviews and 167 participated.

Participants listed building complaints, such as lack of air circulation, temperature extremes, odors and dust in the air. Building areas of concern were identified, as were days and times of problem occurrences. The most frequent symptoms mentioned by employees included headaches, upper respiratory and ocular complaints.

Based upon questionnaire results and agency observations, OPH made recommendations to DEQ at a November 1, 1991 meeting: (1) Indoor Air sampling: specifying target compounds, locations and times, (2) Establishing a smoking policy, (3) Restructuring partitions to maximize air flow, (4) Inspection of building ventilation system, (5) Running air conditioning continuously and (6) Recommending inspection of the building's structural integrity.

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In October and November, the East Baton Rouge Parish Health Unit Sanitarians and Medical Director inspected the Center. Recommendations made on November 18, 1991, include (1) Cleaning all air vents, (2) Removing stained/decomposing ceiling tiles, (3) Cleaning light fixtures, (4) Installing exhaust fans in bathrooms with deodorizers, (5) Unstopping inoperable water fountains and (6) Cleaning ceiling tiles around all air vents.

The sanitarians sampled water from two water fountains and from the kitchen faucet on November 6; no bacteria were found in any of the samples.

On November 8, DEQ and OPH jointly examined the ventilation system. Samples collected by OPH are being evaluated for bacteria, fungi and pollen. Preliminary results indicate a presence of very common mold spores; final results are still pending and anticipated in mid-December. On November 18, while DEQ collected air samples for chemical analysis, OPH sampled for airborne bacteria and fungi. DEQ and OPH will evaluate the data and provide results, conclusions and recommendations to the public. If an environmental health threat i identified during the investigation, recommendations will be made immediately.

The goal of the OPH investigation of Valley Park is to protect the public's health. To do this, all possible information is being this. We want to do the right thing and to do it right, and a collected. Maintaining open communication with the public is a primary component of this process. If you would like additional information, please call Betty Atkins, BSRN, MPH at (504) 568-8537. If not available, you can contact Dianne Dugas, MSW, MPH, Director of the Section of Environmental Epidemiology.

STATE OF LOUISIANA
DEPARTMENT OF HEALTH AND HOSPITALS

Buddy Roemer
GOVERNOR

LOUISIANA
Department of HEALTH and HOSPITALS

David L. Ramsey
SECRETARY

APPENDIX H

RE: VALLEY PARK ADMINISTRATIVE COMPLEX
ACCESSIBILITY SESSION #1 (3:30 PM)
DECEMBER 2, 1991

CITIZEN CONCERN REPORT DATA
(The following comments are transcribed verbatim from the reports submitted by residents at the meeting.)

1. Resident #01
COMMENTS:
(Concerns):
What was dumped on this site? my major concern is how our parking lot looks - what has caused it to look that way? What caused floor to buckle last year in old cafeteria area?
(What brought about concerns):
visual contact on a daily basis

2. Resident #02
COMMENTS:
(Concerns):
Myself and all the Teachers and workers and children - That could be treated for wht ever problems that they are having now.
(What brought about concerns):
We had test on the grounds 10 years ago but we never was told what was found.

3. Resident #03
COMMENTS:
(Concerns):
Various waste sites within the community not just Valley Park School
(What brought about concerns):
health risk within the community
NOTE: She specifically asked for a DEQ contact; her name was given to DEQ 12/3/91.

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4. Resident #04

COMMENTS:

(Concerns):

inadequate ventilation/no windows unexplained odors. feeling of unhealthiness at work which is not prevalent at home

(What brought about concerns):

il health which appears to related to unexplained etiology - Hot most of the time -

5. Resident #05

COMMENTS:

(Concerns):

What about trees ding in your yard. Also - when you drank tap water give your stummer pains

6. Resident #06

COMMENTS: Verbal

RE: VALLEY PARK ADMINISTRATIVE COMPLEX
ACCESSIBILITY SESSION #1 (3:30 PM)
DECEMBER 2, 1991

VERBAL CONCERNS NOTED:

Length of time for results

Any cause/effect relationships

What about population which was here 20 years ago

RE: Interviews - work missed due to illness
(not object of questionnaire)

DEQ - soil/water - working on results from Houston

Complaints over years heard from employees
(Analyze what is under building/brown flecks in water)

Parking lot

Choking, eyes burning - increase ~~as~~ day goes on
(Citizens in neighborhood)

10 years ago complaints of miscarriages in VP area
(Greenpeace ?)

Need deeper soil sampling
(Response to 0-6" soil samples: citizen refers to digging in gardens, etc. = exposure)

Odor in morning/gas
In neighborhood (sewage) Paper mill/ Port Allen

Testing of areas in community or just at VP

Walnut Hills Elem. School near the site

Respiratory/eye problems while in building clear up outside of bldg.

RE: VALLEY PARK ADMINISTRATIVE COMPLEX
ACCESSIBILITY SESSION #2 (6:00 PM)
DECEMBER 2, 1991

CITIZEN CONCERN REPORT DATA
(The following comments are transcribed verbatim from the reports submitted by citizens at the meeting.)

1. Resident #01
COMMENTS:
(Concerns):
Health, Air & Water

2. Resident #02
COMMENTS:
(Concerns):
I have a hard time breathing at night without a fan blowing into my fase. If I turn the fans off, and leave it off to sleep I wake-up trying to get my breath. I need the fan in the inter time also.

3. Resident #03
COMMENTS:
(Concerns):
Children (ages 5-15)
Cancer rate
sinus infections

4. Resident #04
COMMENTS:
(Concerns):
Community health
(What brought about concerns):
Dog's death, headaches, respiratory problems.
NOTE: Verbal comments included questions about 1985 ACORN study, LSU water sample, and sampling after heavy rain.

5. Resident #05
COMMENTS:
(Concerns):
Health - drinking water
(What brought about concerns):
Health - stay in doctors office.
Water

6. Resident #06
COMMENTS:
(Concerns):
Head-aches, Sick of stomac, Upper respiratory
Smell after haves rain
(What brought about concerns):
My Health and my kids Health

7. Resident #07
COMMENTS:
(Concerns):
My shortness of breath
my rash about two years
Smell after heavy rain

RE: VALLEY PARK ADMINISTRATIVE COMPLEX
ACCESSIBILITY SESSION #2 (6:00 PM)
DECEMBER 2, 1991

VERBAL CONCERNS NOTED:

Community concerned: 5 yrs. ago dogs died
sinus problems

Heavy rains - contamination
Odors following rain

Surveys of deformed &/or handicapped children

Water - sampled in homes

Health of children who attended VP for past exposure

Headache, eye infections, learning problems
Odors following rains

Cancer, asthma, respiratory problems - recurrence upon return to area at night

Eye infection - eye color change (green sclera)

Flooding of canal into yards (2 yrs.)

Sore throat following exposure to night air

Ringworm/skin irritation

Buddy Roemer
GOVERNOR

DEPARTMENT OF HEALTH AND HOSPITALS
APPENDIX I

OFFICE OF PUBLIC HEALTH
EAST BATON ROUGE PARISH HEALTH UNIT
353 N. 12th STREET
P. O. BOX 3017
BATON ROUGE, LOUISIANA 70821
PHONE #: (504)342-1734/FAX #: (504)342-5821

Department of HEALTH and HOSPITALS
David L. Ramsey
SECRETARY

November 20, 1991

Betty Atkins
Department of Health and Hospitals
Office of Public Health - S.E.E.
234 Loyola #620
New Orleans, LA 70112

RE: VALLEY PARK ADMINISTRATION CENTER @ 4510 BAWELL

Dear Ms. Atkins:

On November 18, 1991, Dr. Larry J. Hebert and I made an inspection at the above location. We recommend that the following items be addressed:

1. Thoroughly clean all air conditioning vents and return air vents.
2. Remove the stained sections of ceiling tiles throughout the building.
3. Thoroughly clean all light fixtures throughout the building.
4. Install an exhaust fan in the restroom where deodorizers are present.
5. Unstop the drinking fountains that are inoperable.
6. Clean the ceiling tiles around all air vents.

At the direction of Larry J. Hebert, M.D. Director.

Sincerely,

Larry J. Hebert MD

Dr. Larry J. Hebert, M.D.
Director

C. G. Moy, R.S.

C. G. Moy, R.S.
Sanitarian Parish Manager II

LJH/CGM:jed

REFERENCE NO.

15

SCREENING SITE INSPECTION WORK PLAN

of

VALLEY PARK SCHOOL

(LAD985170273)

Prepared by

Tom Mayhall, Environmental Specialist

The Department of Environmental Quality
Inactive and Abandoned Sites Division

April 7, 1991

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VALLEY PARK SCHOOL

BATON ROUGE, LOUISIANA

1. INTRODUCTION

The U.S. Environmental Protection Agency (EPA) has tasked the Inactive and Abandoned Sites Division (LDEQ) to develop a work plan for the screening site investigation (SSI) of the Valley Park School in Baton Rouge, East Baton Rouge Parish, Louisiana. The EPA Site Identification number for this site is LAD985170273. This investigation is performed under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA).

1.1 Screening Site Investigation Objectives

The SSI evaluates the potential risks associated with hazardous waste generation, storage and disposal at the site. It expands upon data collected during the Preliminary Assessment (PA) and identifies data gaps. Information obtained during the SSI supports the management decision of whether the site qualifies for the Listing Site Inspection (LSI) or receives the classification of No Further Action under the Superfund Amendments and Reauthorization Act (SARA).

1.2 Site Description

The Valley Park School site, hereinafter referred to as "the site," occupies approximately thirty-six (36) acres within the city limits of Baton Rouge, Louisiana. The site is rectangular shaped and is bounded by Bawell Street to the north; Narine Street to the west; Dawson Creek to the south; and a drainage ditch to the east. The geographic coordinates are: 30 degrees, 26' 33" N latitude and 91 degrees, 08' 38" W longitude. It is divided approximately in half from East to West by U.S. Interstate Highway 10.

The Northern half of the site is owned by the East Baton Rouge School Board. The twenty-three (23) acre area consists of one building, parking lots, basketball court and two baseball fields. An average of 1300 adult students and 300 staff members occupy the administration building. The East Baton Rouge Parish Recreation and Parks Commission and the Baton Rouge City-Parish separately own two parcels of land located in the southern half of the site, totaling 13 acres. The southern area of the site includes an indoor recreational center, three adjacent buildings, a baseball field, an adolescent playground area, and a large stockpile of dirt. Approximately 1500 people use the recreation center and 300 people use the outdoor facilities on a monthly basis. The three buildings are occupied by twenty-seven City-Parish staff members

1.3 Operating History

The Baton Rouge City-Parish began using the site in the 1940's. It was named the Valley Park Landfill and used as a backup to their primary landfill, the McKinley Street Landfill. The site served as the City-Parish's primary landfill from 1958 through 1963. No records were maintained as to types or quantities of materials placed at the site. Construction of the Interstate (I-10) dividing the site commenced in 1963 and was completed in 1965.

In August, 1965, the East Baton Rouge Parish School Board acquired the site property north of I-10. Construction of the Valley Park School building began in 1966 and was completed in 1968. It operated as a junior high school from 1968 to 1973 and then operated as a middle school until 1986, to its present use for administration and adult education. The building is situated directly above the landfill. The sanitary fill could not be used for a suitable foundation support, therefore, the building is supported by wooden pilings at a 15-foot depth into a pleistocene clay.

2. NON-SAMPLING DATA

The following sections briefly characterize sources and migration pathways and identifies those background and site environs data elements that remain to be collected and/or verified during the SSI.

2.1 Source/Waste Characterization

The potential on-site source of contamination is potentially from the municipal waste that is buried at the site. The City-Parish maintained no records as to types or quantities of waste materials received by its landfills prior to the early 1970's. It is estimated that the site includes 36 acres of garbage/fill material approximately seven feet deep covered by a two foot clay cap.

There are no containment structures on the site except the clay cap. A site visit will be made to verify the depth and condition of the clay cap for documentation in the SSI report. Ten boreholes will be installed for the purpose of verifying the depth and condition and are identified in Figure 4 and 5. A one inch screw type hand operated auger will be used for this purpose. The soil surface will be penetrated from the surface to a maximum depth of as five feet, or until garbage/fill is encountered. The borehole will be physically described as to clay vs. garbage/fill. The boreholes will be properly filled with grout.

2.2 Air Pathway

The site is located within a densely populated urban area. The target population within the four mile target limit of the site is calculated based on 1990 U. S. Census figures. The population is as shown below:

RADIUS DISTANCE FROM SITE	POPULATION
0 to ¼ mi	414
¼ to ½ mi	2,312
½ to 1 mi	5,686
1 to 2 mi	17,054
2 to 3 mi	48,873
3 to 4 mi	51,359
TOTAL	125,698

2.3 Ground Water Pathway

Information from the Valley Park Administrative building construction logs identify nine borings were, indicating a hard pleistocene clay layer which blankets the site, beginning at a depth of fifteen (15) feet and extending to a depth of fifty (50) feet.

East Baton Rouge Parish overlies twelve (12) freshwater aquifers aligned in layers of sand from 200 to 3100 feet below sea level, except for the alluvial sand layers near the surface that lie near the Mississippi River and northward as far as into the state of Mississippi. A blanket layer of hard pleistocene clay of varying thickness serves as an barrier, restricting migration of contaminants into the aquifers below.

The flow direction of the University sand aquifer in East Baton Rouge Parish appears to flow in a north to south-southwest direction, as does the 400 ft. sand. The "University Sand" lies above the 400' Sand and is the most surfical aquifer having monitoring wells. Three wells for sampling locations have been established south of the site ranging from 334 to 361 feet in depth located in the "University sand ". There is no documentation concerning horizontal flow in this aquifer, however the "University sand" and the 400 foot sand are considered to have a close relationship in that they interconnect at the Baton Rouge fault. Ground water direction is well documented for the 400 'sand (See memorandum dated March 13, 1991).

Five samples will be taken from the "University Sand", one of which will be a duplicate. One of these samples will be taken North of the site, at a depth of 390 ft., as a background sample. The wells identified for sampling are the shallowest used for domestic or public supply.

2.4 Surface Water Pathway

An open drainage ditch bounds the site on the east side, and flows Southwesterly into Dawson Creek. It is approximately 60 feet in width and 30 feet deep. The ditch serves as a major drainage system for the area North of the site. Dawson Creek borders the southern end of the site. Surface run-off and leachate from the site appear to flow into Dawson Creek. Dawson Creek flows southeasterly 6.3 miles emptying into Ward's Creek. At a point 12.3 miles downstream from the site, Ward's joins Bayou Manchac. The target distance limit of fifteen (15) miles is reached 2.7 miles downstream on Bayou Manchac, where Welsh Gully intersects.

The Bayou Manchac is used for recreational purposes including fishing and hunting. Residential dwellings exist along the Bayou Manchac with the 15 mile target distance limit. No declared wetland and/or sensitive environments exist within the 15 mile target distance limit. There are no known drinking water intakes along the 15 mile target limit distance limit.

2.5 On-Site Exposure Pathway

Two areas have been targeted on-site exposure pathway consideration and are: (1) observed intermittent leachate flowing into the drainage ditch just south of the school building, and (2) the recreational surface play areas.

3. ANALYTICAL DATA

Thirty two environmental samples will be collected for laboratory analyses to document possible hazardous substances on-site, and the extent to which contaminants may have migrated off-site or into the groundwater.

3.1.0 Existing Analytical Data

In December, 1981, the Louisiana Department of Natural Resources (DNR) contracted for testing of one water and three sludge samples from the site. They were tested for 14 heavy metals in the water sample, and 88 organic compounds in the sludge samples. LDNR finalized the report, stating "There were no environmental problems at this time."

In August, 1982, three Louisiana State University (LSU) faculty researchers sampled the site. A report of this is identified in the PA report. The report identified soil-sediment samples taken on the west banks of the drainage ditch, just south of the school building, contained elevated levels of Zinc, Cadmium, and Lead. Arsenic concentrations were found to be 10 times higher than the upstream samples. The report identified two leachate points of discharge which were actively flowing into the drainage ditch located just south of the school. In November, 1982, DNR sampled the site resulting in the presence of two volatile organic priority pollutants: (1) Chloroform was detected at 13 ppb, (2) methylene chloride detected at 70 ppb, both from the school playground. Fifteen semi-volatiles were detected at the site at low levels. Pesticides and PCBs were not detected at the site.

Analyses from three sampling episodes have been reviewed in the preparation and selection of sampling locations for this workplan. Review and verification will be made of the analysis results as it relates to a particular pathway for the SSI report.

3.2.0 SSI Sampling Strategy

The overall objective of the SSI sampling strategy is to collect analytical data to refine the score for those factors that may have the greatest impact on the site score. All samples taken will be analyzed using the latest EPA accepted protocol for analytical methods to include full TCL and TAL parameters. All sample collection, preservation, QA/QC (including the preparation of field blanks and duplicates), and chain-of-custody procedures used during this investigation will be in accordance with accepted EPA protocol. Sampling locations may be modified in the field during the sampling event as the situation dictates or as the on-site manager determines.

The onsite exposure pathway is of high concern considering the high usage of the school and recreational facilities. The groundwater and surface water pathway are also of concern because previous sampling of leachate has indicated the presence hazardous substances. The design of the sampling locations will most adequately confirm the presence of hazardous substances detected from previous sampling and address other areas of most consern which pose potential health and/or environmental threats. The samples to be collected are identified and discussed in the following sections in their particular pathway and described in Table 1. The proposed sampling locations are detailed in Figures 2, 3 and 4.

3.2.1 Source/Waste Characterization

The chemical analysis will identify hazardous substances of concern. From this information, toxicity and mobility information will be generated. The SSI this information, toxicity and mobility information will be generated. The SSI report will describe the hazardous waste quantity and the containment features such as liners and cover. To define quantity, the following parameters will be addressed for each source; hazardous constituent quantity, hazardous waste stream, volume of landfill, contaminated soils, piles and others. The chemical analysis and definitions will be used to define the waste characteristics.

3.2.2 Air Pathway

No air sampling for laboratory analysis is planned at this time. Future soil gas and indoor air sampling for analysis may be warranted in future investigations. As a contingency, if hydrogen sulfide odors are detected during sample collection a sample will be collected for analysis.

3.2.3 Groundwater Pathway

Six water well samples will be sampled. Sample nos. 26, 27, 28, 29 and 30 are located downgradient from the site and located in the shallowest and closest wells to the site. These wells are located in the University sands, ranging from 304 to 361 ft. in depth. This aquifer underlies the 400 ft. sand aquifer. The University sands horizontal flow is complex and is not well defined. It is of a general opinion that the University sand most probably flows in the same direction as the well defined 400 ft. aquifer which is in a north to south-southwest direction. There is close relationship between the 400 ft. sands and the University sands as they are hydraulically connected at the Baton Rouge fault. The Baton Rouge Fault runs almost directly east to west and is located approximetely 300 ft. N. of the site. Background sample no. 31 is located in the 400 ft. aquifer upgradient of the site. Well Sample no. 27 is a field duplicate of sample no. 26.

The wells to be sampled south of the fault are used primarily for watering and cooling purposes and are not specifically designated for public supply. There are no public water supply wells south of the fault in the area. All public supply wells for Baton Rouge are located north of the fault due to salt water intrusion in the deeper sands south of the fault. The fault restricts flow in most of the aquifers preventing salt water intrusion in the deeper aquifers. See Table 1 for field sampling rationale and Figure 2 for locations.

Two aqueous samples, nos. 15 and 16, will be collected from leachate previously sampled and analyzed which resulted in detection of hazardous substances. Both sample points are located on the west bank of the drainage ditch approximately 200 feet south of the school building and 5 to 15 feet below ground surface. The leachate is most probably from precipitation that has migrated through the waste/fill material. These samples may also qualify for the surface water pathway, source/waste characterization and/or for on-site exposure. See Table 1 for field sampling rationale and Figures 3 and 4 for locations.

3.2.4 On-Site Exposure

The onsite exposure pathway sampling addresses the relative risk to the public that may be exposed by direct contact with potentially contaminated soils, wastes or effluent containing. Ten surface soil samples will be collected. Sample Nos. 22, 2, 3, 11, 32 and 12 will be collected from low lying areas and/or high use areas exposed to the public. Sample nos. 6 and 7 will be collected where it is apparent the soils are influenced by the leachate. Background sample No. 1 will be collected from a vacant lot that is not under the influence of the landfill. Results from this sample will be compared to results from the other surface soil samples. Surface soil Sample no. 25, will be collected for QA/QC qualification. See Table 1 for field sampling rationale and Figures 3 and 4 for locations.

3.2.5 Surface Water Pathway

Seven aqueous and eight sediment samples will be collected. Four aqueous, nos. 8, 17, 9 and 21 and four sediment samples, nos. 18, 10, 19 and 5 will be collected from areas located under the influence of the site. Sample no. 5 will be collected from sediments that have accumulated in a storm drain directly beneath a surface drain grate. Hazardous substances detected from this sample would indicate surface run-off contamination. Sediment samples nos. 4 and 14 and aqueous samples nos. 20 and 13 are background samples and are not under the influence of the site. Results of these background samples will be used for comparative purposes. Aqueous sample no. 23 and sediment sample no. 24 are field duplicates for QA/QC qualification. See Table 1 for field sampling rationale and Figures 3 and 4 for locations.

3.2.6 QA/QC Requirements

Twenty-eight environmental samples will be collected for analyses. One field duplicate sample will be collected for every ten samples collected in each matrix. A total of four duplicate samples will be collected one from the surface soil grouping, one from the sediment grouping and two from aqueous sample grouping. Table 1 and Figures 2, 3 and four.

4. PROJECT MANAGEMENT

4.1 Key Personnel

The Project Manager for this sampling investigation will be an assigned member of the DEQ/IAS Divisional staff. The Project Manager's responsibilities include assuring that site access authority is obtained, directing and overseeing all on-site and off-site activities associated with the investigation, documentation, site safety and managing all samples collected. Three additional personnel will be assigned to perform the collection of samples.

4.2 Schedule

Initial background and site environs data will be pursued, as necessary from this office, to the extent possible, in advance of mobilization. Site access will obtained when the SSI workplan is approved and funding of sample analysis obtained. It is anticipated that all environmental sampling and onsite data collection activities can be completed within three days. Site access for a total of five days will be arranged as a contingency.

4.3 Level of Effort (LOE) and Sampling Requirements

The estimated LOE expenditure and sampling requirements for this investigation are detailed in Table 2.

4.4 Sampling Procedures

The following methods will be used for each identified matrix:

SURFACE SOIL

1. Surface vegetation and an inch of soil will be removed.
2. A 3 1/2 inch hand auger will be used to collect a grab sample from a 6 inch to 1 foot interval
3. The sample will then placed in a stainless steel bowl.
4. Roots and other debris will be removed.
5. The sample will then be transferred into containers provided by the laboratory specific to the particular analytical fraction.
6. The samples will be properly labeled using an i.d. number specific to the sample location which identifies the date and the person packaging the sample.
7. The sample containers will then be transferred to a cooler and stored to 4° C.
8. The samples will then be transferred to the laboratory within 24 hrs.

SEDIMENT SAMPLES

1. Sample collection will commence down stream and continue upstream to minimize the influence of upstream disturbance.
2. An Eckman dredge or other appropriate sediment sampling device will be used to collect the first six inch layer of sediment
3. The material will be placed in a stainless steel pan.
4. Roots and other debris will be removed.
5. The sample will then be transferred into containers provided by the laboratory specific to the particular analytical fraction.
6. The samples will be properly labeled using an i.d. number specific to the sample location which identifies the date and the person packaging the sample
7. The sample containers will then be transferred to a cooler and stored to 4° C.
8. The samples will then be transferred to the laboratory within 24 hrs.

AQUEOUS SAMPLES

1. Sample collection will commence down stream and continue upstream to minimize the influence of upstream disturbance.
2. Surface water samples will be taken by dipping a large stainless steel bowl into the center of the stream or catching the effluent from the embankment when appropriate or from a water well discharge point.
3. Care will be taken as not to disturb the bottom sediments.
4. VOA bottles will be filled first to minimize volatilization of the sample with all air removed.
5. The sample will then be transferred into containers provided by the laboratory specific to the particular analytical fraction.
6. The samples will be properly labeled using an i.d. number specific to the sample location which identifies the date and the person packaging the sample

5. Sample containers will be filled as full as possible, firmly capped and placed into cooler and stored to 4° C.
8. The samples will then be transferred to the laboratory within 24 hrs.

4.5 Decontamination Procedure

All Sampling equipment will be:

1. Scrubbed with a brush to remove visible dirt.
2. Rinsed with potable water.
3. Scrubbed with soap and potable water.
4. Sprayed with methanol.
5. Rinsed with deionized water.
6. Wrapped in plastic bags for cleanliness.

4.6 Health and Safety Procedures

All members of the sampling team will:

1. Be OSHA qualified for personnel protection and safety.
2. Be using level D protective clothing unless field conditions warrant other levels of protection.

3. Determine the presence of organic vapors at the borehole using a portable organic vapors detector.
4. Wear inner surgical gloves with outer gloves and changed between each sample collected.
5. Not be using respiratory equipment unless field conditions warrant otherwise.

TABLE 1

SAMPLING LOCATIONS AND RATIONALE

SAMPLE NO.	*MATRIX*	*LOCATION*	*RATIONALE*
1	SURFACE SOIL	VACANT LOT (OFF-SITE)	BACKGROUND
2	SURFACE SOIL	N. OF ADULT LEARNING CTR.	DETERMINE PRESENCE OF SURFICAL CONTAMINATION
3	SURFACE SOIL	S. OF PARKING LOT IN LOW LYING AREA	IDENTIFY PRESENCE OF SURFICAL CONTAMINATION
4	SEDIMENT	STORM SEWER OUTFALL	BACKGROUND - UPSTREAM OF DITCH
5	SEDIMENT	S. OF BASKETBALL CT. BENEATH SUBSURFACE DRAINAGE GRATE	IDENTIFY PRESENCE OF CONTAMINATION IN ACCUMULATED SILT ORIGINATING FROM SURFACE RUNOFF
6	SURFACE SOIL	WEST BANK OF DRAINAGE DITCH AT LEACHATE DISCHARGE POINT	IDENTIFY PRESENCE OF CONTAMINANTS ACCUMULATED FROM LEACHATE
7	SURFACE SOIL	WEST BANK OF DRAINAGE DITCH AT LEACHATE DISCHARGE POINT	IDENTIFY PRESENCE OF CONTAMINANTS ACCUMULATED FROM LEACHATE
8	AQUEOUS	DISCHARGE FROM CORRUGATED DRAIN	IDENTIFY PRESENCE OF CONTAMINANTS FROM SURFACE DRAINAGE
9	AQUEOUS	SURFACE WATER IN DRAINAGE DITCH S. OF I-10	DETERMINE PRESENCE OF CONTAMINANTS DOWNFLOW OF N. SECTION OF SITE AND DETERMINE INFLUENCE FROM DRAINAGE FROM PAVED DRAINAGE DITCH

TABLE 1 (CONTINUED)

SAMPLING LOCATIONS AND RATIONALE

SAMPLE NO.	MATRIX	LOCATION	RATIONALE
10	SEDIMENT	DRAINAGE DITCH S. OF I-10	DETERMINE PRESENCE OF CONTAMINANTS DOWNFLOW OF N. SECTION OF SITE AND DETERMINE INFLUENCE FROM DRAINAGE FROM PAVED DRAINAGE DITCH
11	SURFACE SOIL	LOW AREA AT PLAYGROUND AREA	DETERMINE PRESENCE OF CONTAMINANTS IN HIGH USE AREA
12	SURFACE SOIL	SMALL DITCH	IDENTIFY PRESENCE OF CONTAMINANTS MIGRATING FROM SURFACE RUNOFF TO SURFACE WATER PATHWAY
13	AQUEOUS	100' W. NARIN DR. BRIDGE IN DAWSON CREEK (OFF-SITE)	BACKGROUND SAMPLE AND DETERMINE IF CONTAMINANTS ARE REPRESENT UPSTREAM OF SITE
14	SEDIMENT	100' W. NARIN DR. BRIDGE IN DAWSON CREEK (OFF-SITE)	BACKGROUND SAMPLE AND DETERMINE IF CONTAMINANTS ARE PRESENT UPSTREAM OF SITE
15	AQUEOUS	WEST BANK OF DRAINAGE DITCH AT LEACHATE DISCHARGE POINT	IDENTIFY PRESENCE OF CONTAMINANTS IN LEACHATE AND DETERMINE AFFECTS ON MIGRATION PATHWAY
16	AQUEOUS	WEST BANK OF DRAINAGE DITCH AT LEACHATE DISCHARGE POINT	IDENTIFY PRESENCE OF CONTAMINANTS IN LEACHATE AND DETERMINE AFFECTS ON MIGRATION PATHWAY
17	AQUEOUS	MAIN DRAINAGE DITCH N. OF PAVED DRAINAGE DITCH	IDENTIFY PRESENCE OF CONTAMINANTS FROM LANDFILL POTENTIALLY AFFECTING MIGRATION PATHWAY

TABLE 1 (CONTINUED)

SAMPLING LOCATIONS AND RATIONALE

SAMPLE NUMBER	MATRIX	LOCATION	RATIONALE
18	SEDIMENT	MAIN DRAINAGE DITCH N. OF PAVED DRAINAGE DITCH	IDENTIFY PRESENCE OF CONTAMINANTS FROM LANDFILL POTENTIALLY AFFECTING MIGRATION PATHWAY
19	SEDIMENT	50 ' S. OF DRAINAGE DITCH OUTFALL (OFF-SITE)	IDENTIFY PRESENCE CONTAMINANTS DOWNGRADIENT OF SITE TO DETERMINE LANDFILL INFLUENCE ON MIGRATION PATHWAY
20	AQUEOUS	STORM SEWER OUTFALL	BACKGROUND - UPSTREAM OF DITCH
21	AQUEOUS	50 ' S. OF DRAINAGE DITCH OUTFALL (OFF-SITE)	IDENTIFY PRESENCE CONTAMINANTS DOWNGRADIENT OF SITE TO DETERMINE LANDFILL INFLUENCE ON MIGRATION PATHWAY
22	SURFACE SOIL	LOW AREA AT I-10 RIGHT OF WAY	IDENTIFY PRESENCE OF ACCUMULATED CONTAMINANTS WHERE LEACHATE HAS BEEN OBSERVED PREVIOUSLY
23	AQUEOUS	50 ' S. OF DRAINAGE DITCH OUTFALL (OFF-SITE)	QA/QC DUPLICATE OF SAMPLE NO. 20
24	SEDIMENT	50 ' S. OF DRAINAGE DITCH OUTFALL (OFF-SITE)	QA/QC DUPLICATE OF SAMPLE NO. 4
25	SURFACE SOIL	WEST BANK OF DRAINAGE DITCH AT LEACHATE DISCHARGE POINT	QA/QC DUPLICATE

TABLE 1 (CONTINUED)

SAMPLING LOCATIONS AND RATIONALE

SAMPLE NUMBER	MATRIX	LOCATION	RATIONALE
26	AQUEOUS	WATER WELL I.D. NO.302439091103001 LSU FOOTBALL PRACTICE FIELD	TO DETERMINE IF HAZARDOUS SUBSTANCES POTENTIALLY FROM THE LANDFILL HAS MIGRATED TO THE UNIVERSITY AQUIFER
27	AQUEOUS	WATER WELL I.D. NO.302434091103001 LSU SYSTEMS BUILDING	FIELD DUPLICATE OF SAMPLE NO. 26 FOR QA/QC QUALIFICATION
28	AQUEOUS	WATER WELL I.D. NO.302456091101301 LSU ACADIAN DORMATORY BLDG.	TO DETERMINE IF HAZARDOUS SUBSTANCES POTENTIALLY FROM THE LANDFILL HAS MIGRATED TO THE UNIVERSITY AQUIFER
29	AQUEOUS	WATER WELL I.D. NO.302443091101201 ROSE GARDEN	TO DETERMINE IF HAZARDOUS SUBSTANCES POTENTIALLY FROM THE LANDFILL HAS MIGRATED TO THE UNIVERSITY AQUIFER
30	AQUEOUS	WATER WELL I.D. NO.302422091094401 LSU 861 DELGADO DR. OWNER: C. M. NEHER	TO DETERMINE IF HAZARDOUS SUBSTANCES POTENTIALLY FROM THE LANDFILL HAS MIGRATED TO THE UNIVERSITY AQUIFER
31	AQUEOUS	WATER WELL I.D. NO.302611091075001 5620 BERKSHIRE DR. OWNER: J. OBERLING	BACKGROUND - UPGRADIENT FROM THE SITE
32	SURFACE SOIL	CHILDREN'S PLAYGROUND	TO DETERMIN IF HAZARDOUS SUBSTANCES HAVE MIGRATED THRU THE CAP CONTRIBUTING TO ONSITE EXPOSURE

TABLE 2

SUMMARY OF LOE AND SAMPLING REQUIREMENTS

Labor Estimates By Task	LOE (Hrs.)
Review of PA and supporting materials	24
Initial background data collection	24
Obtaining access and making advance arrangements	16
SSI Workplan	80
Mobilization and Travel (2 X 16 hrs)	32
In-the-field site environs data collection (2 X 16)	32
Environmental sampling (4 X 24 hrs.)	96
Demobilization, deconning and travel (2 X 16hrs.)	32
Analysis of sampling results	24
Preparation of SSI report	120
Sub Total	480
Plus 10% Contingency	48
Grand Total	528 hrs.

SAMPLE REQUIREMENTS

28 Environmental samples

4 Duplicate samples

32 Total samples

Louisiana Department of Environmental Quality

FIGURE 1

SITE LOCATION MAP

VALLEY PARK LANDFILL
BATON ROUGE, LA

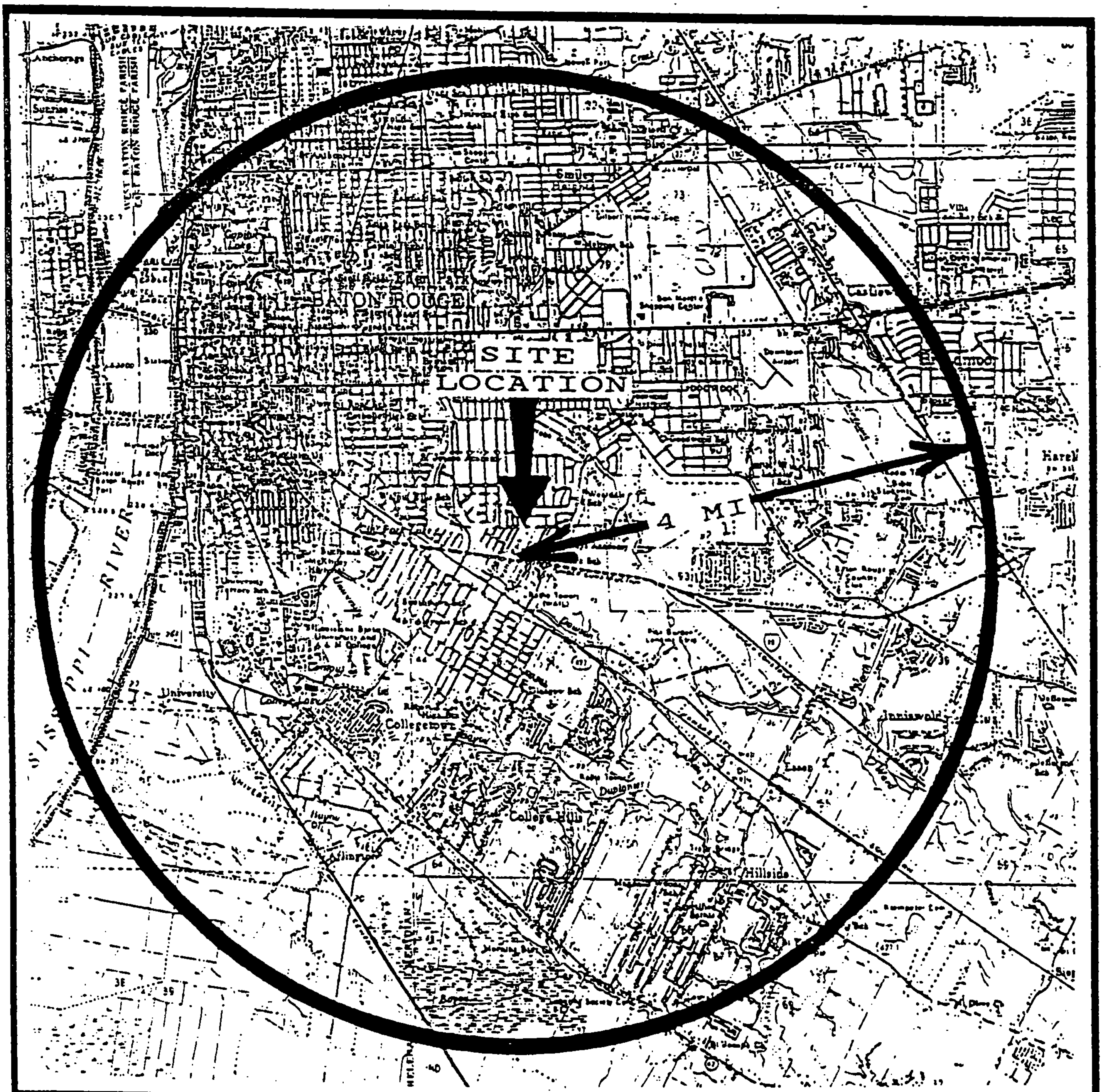


FIGURE 2

WATER WELL SAMPLING LOCATIONS

VALLEY PARK LANDFILL
BATON ROUGE, LA

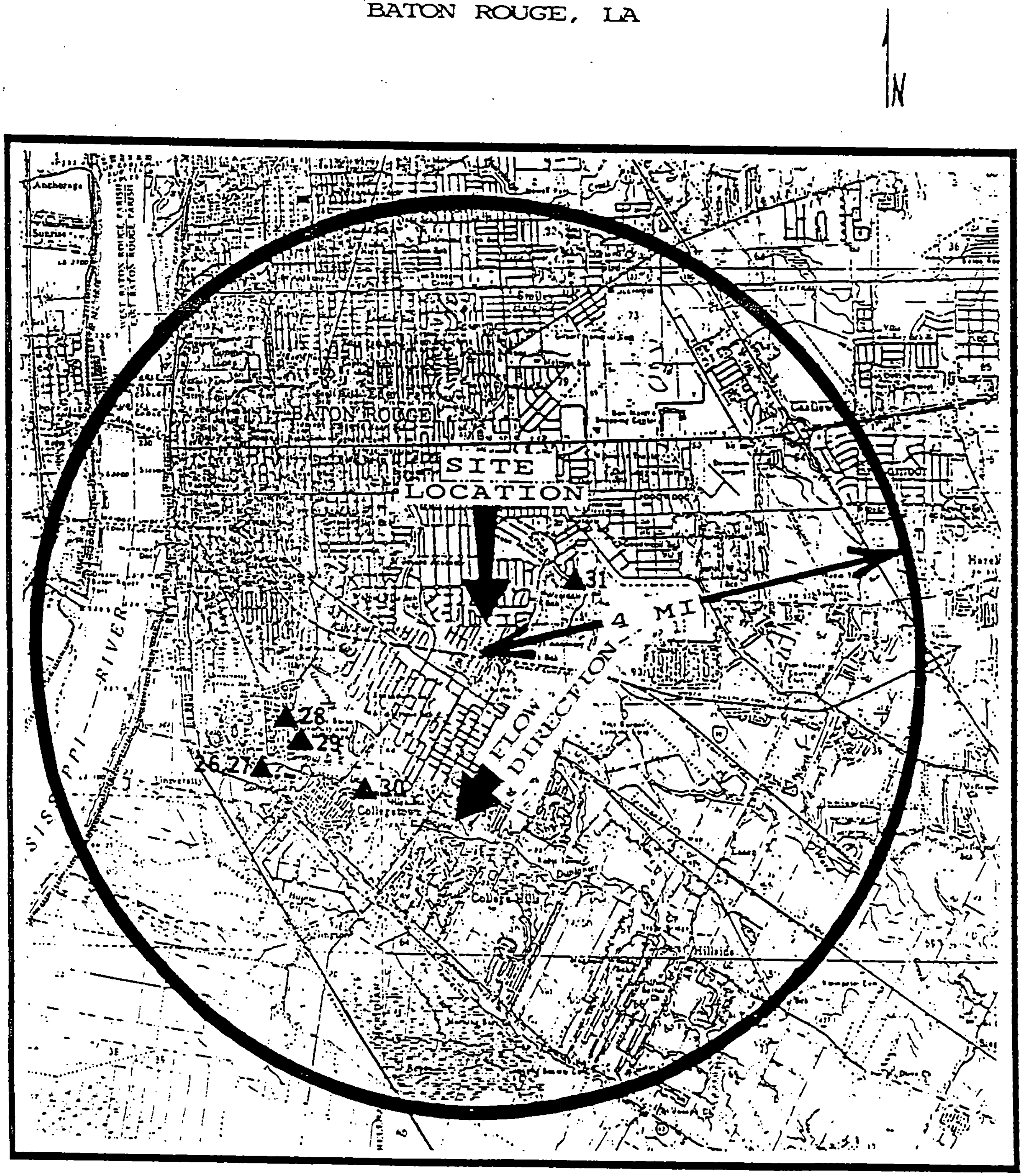


FIGURE 3

SAMPLING LOCATION PLAT

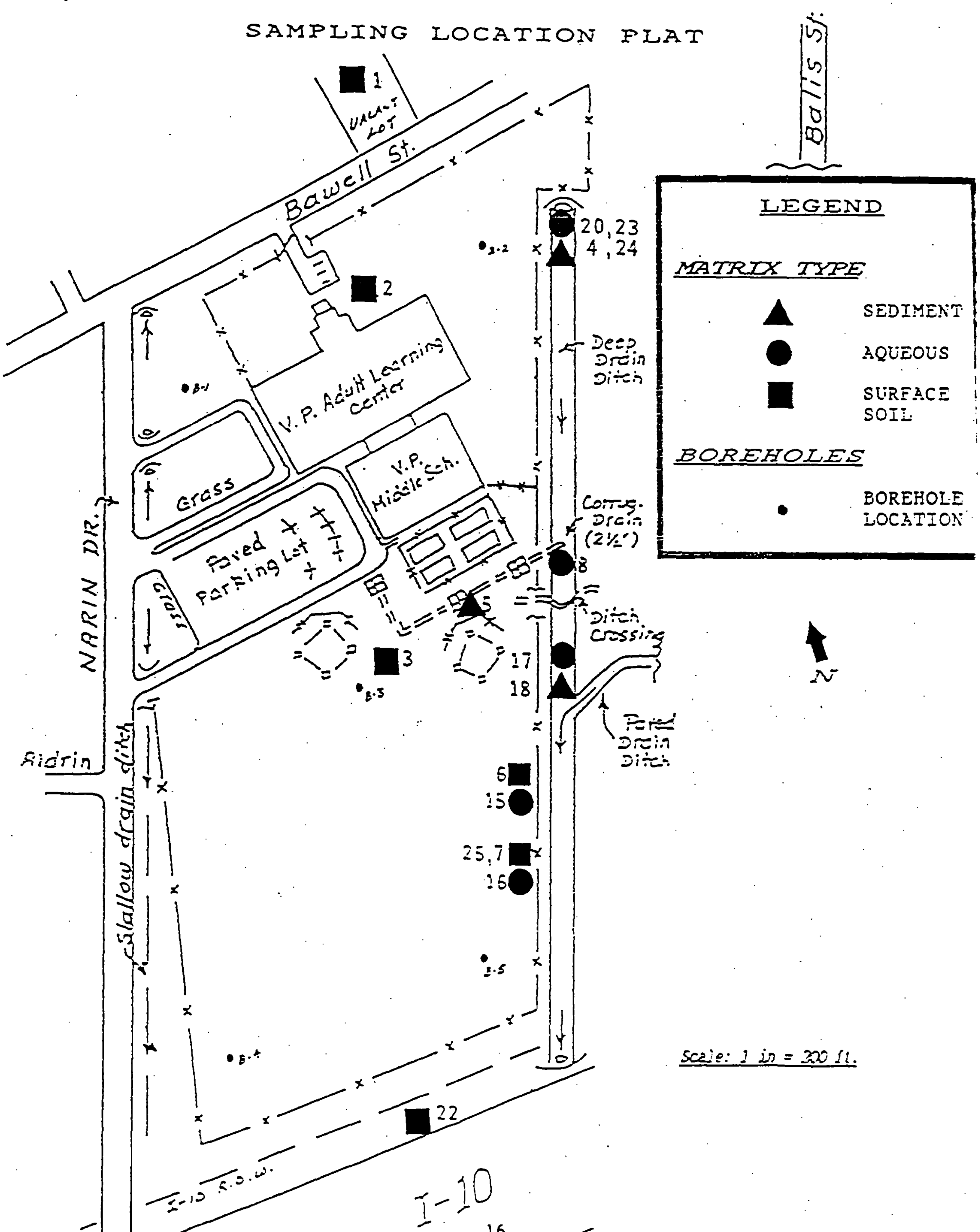


FIGURE 4

SAMPLING LOCATION PLAT

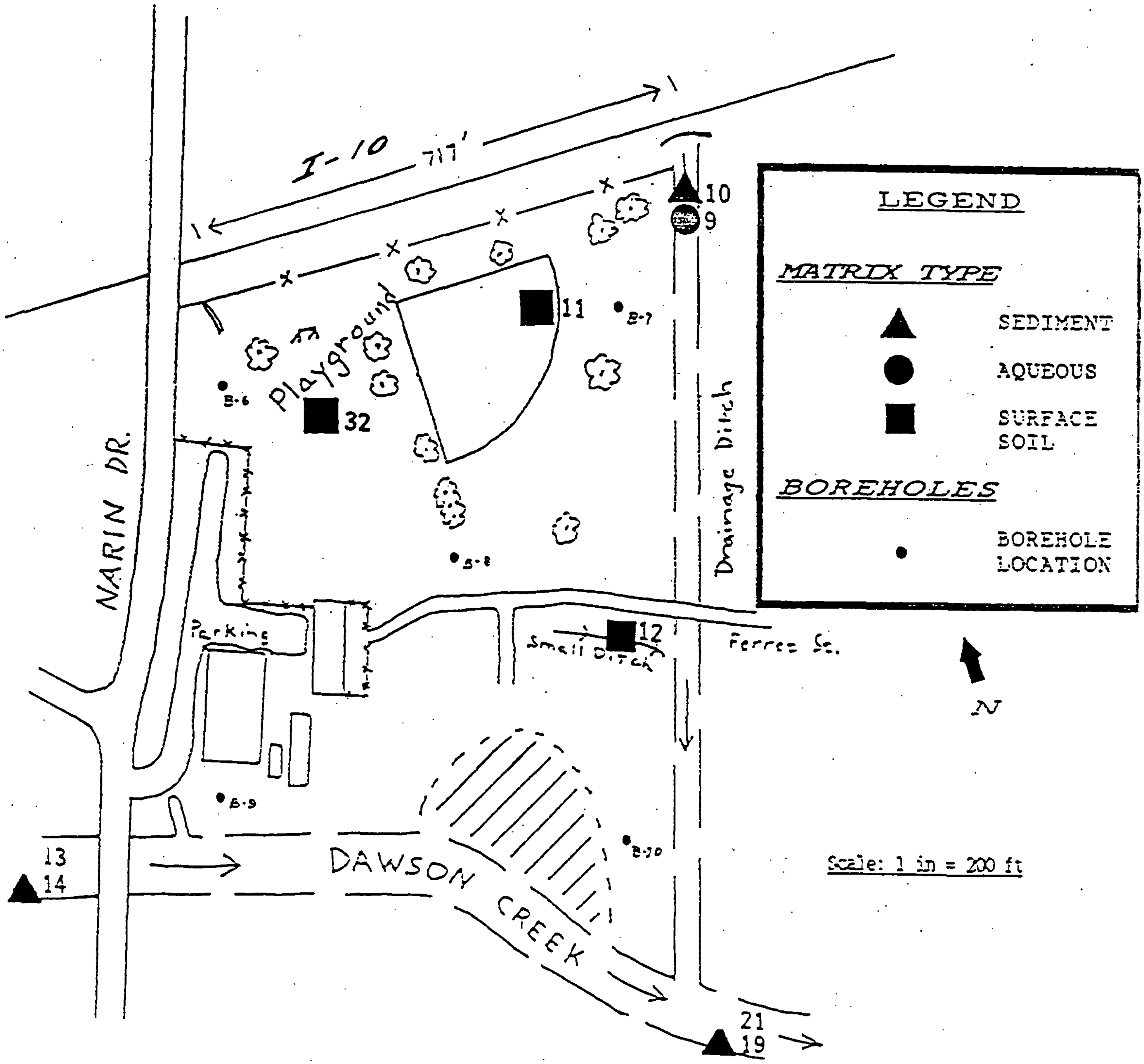
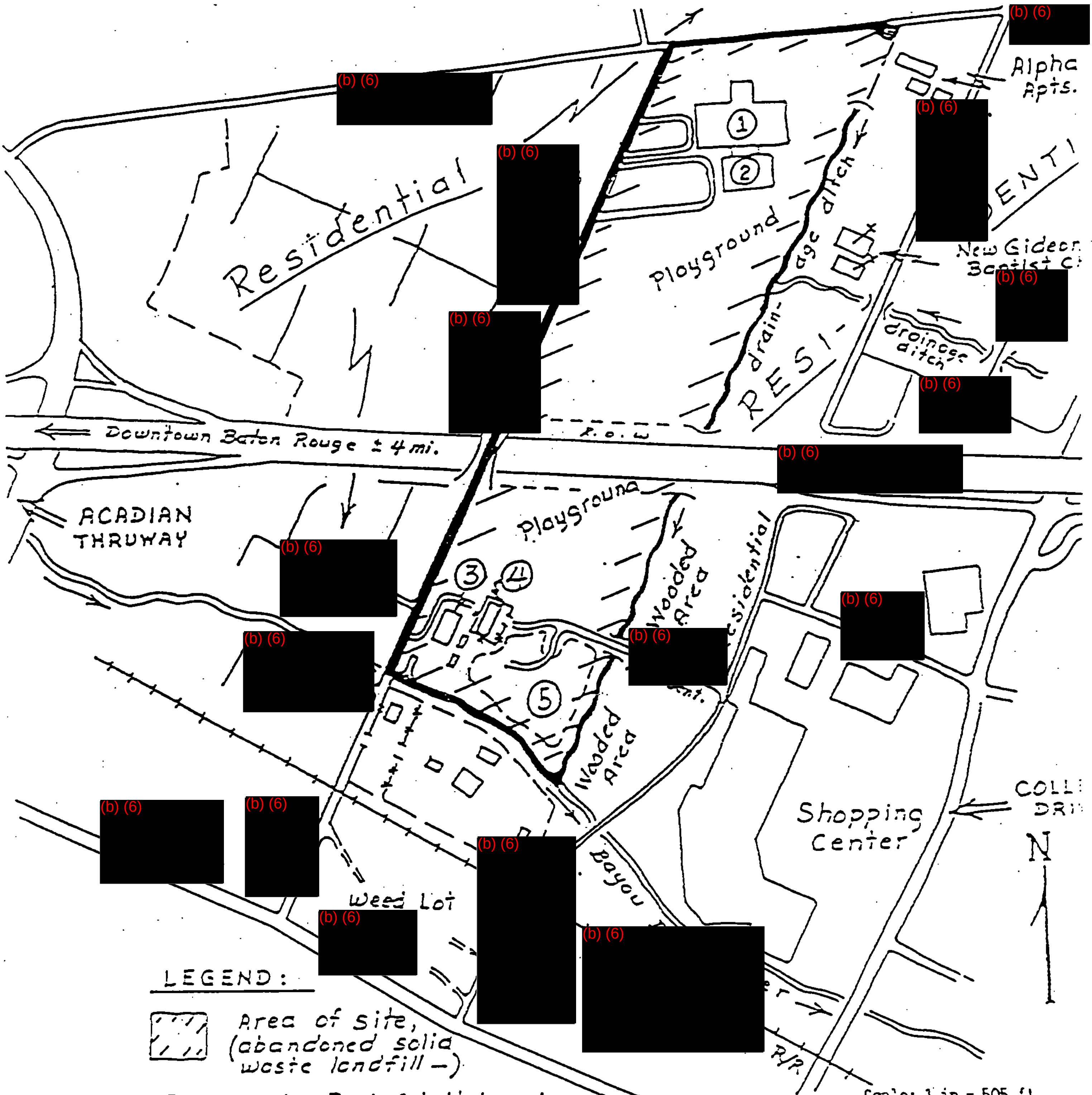


FIGURE 5

SITE FACILITIES PLAT



LEGEND:

Area of site, (abandoned solid waste landfill –)

1. Valley Park Adult learning Center
2. Valley Park Administration Build.
3. [redacted] Park (A BREC facility)
4. Dept. of Public Works, S. Maint. Lot
5. Dept. P.W., Stockpile excess dirt and broken concrete ...

REFERENCE NO.

16

State of Louisiana

Department of Environmental Quality

Edwin W. Edwards
Governor

Kai David Midboe
Secretary

March 30, 1992

M E M O R A N D U M

To: File

From: Tom Mayhall, EQSI *M*
IAS Division

Re: Valley Park School

On February 24, 1992, Keith Horn and I installed ten boreholes at the Valley Park Landfill. The investigation was in accordance with tasks outlined in the Valley Park Work Plan dated April 7, 1991. The purpose was to verify the depth and condition of the landfill cap to be described in the SSI Report.

Nine boreholes were installed using a three inch hand operated auger at the locations on the attached plat. Each borehole had at least a two foot clay cap. Garbage/fill was encountered at each borehole at two to three feet. The general condition of the cap was good. There were no apparent outcroppings of garbage on top of the site. Although, outcroppings of garbage were observed along the east side of the site along an open ditch.

TM/ph

REFERENCE NO.

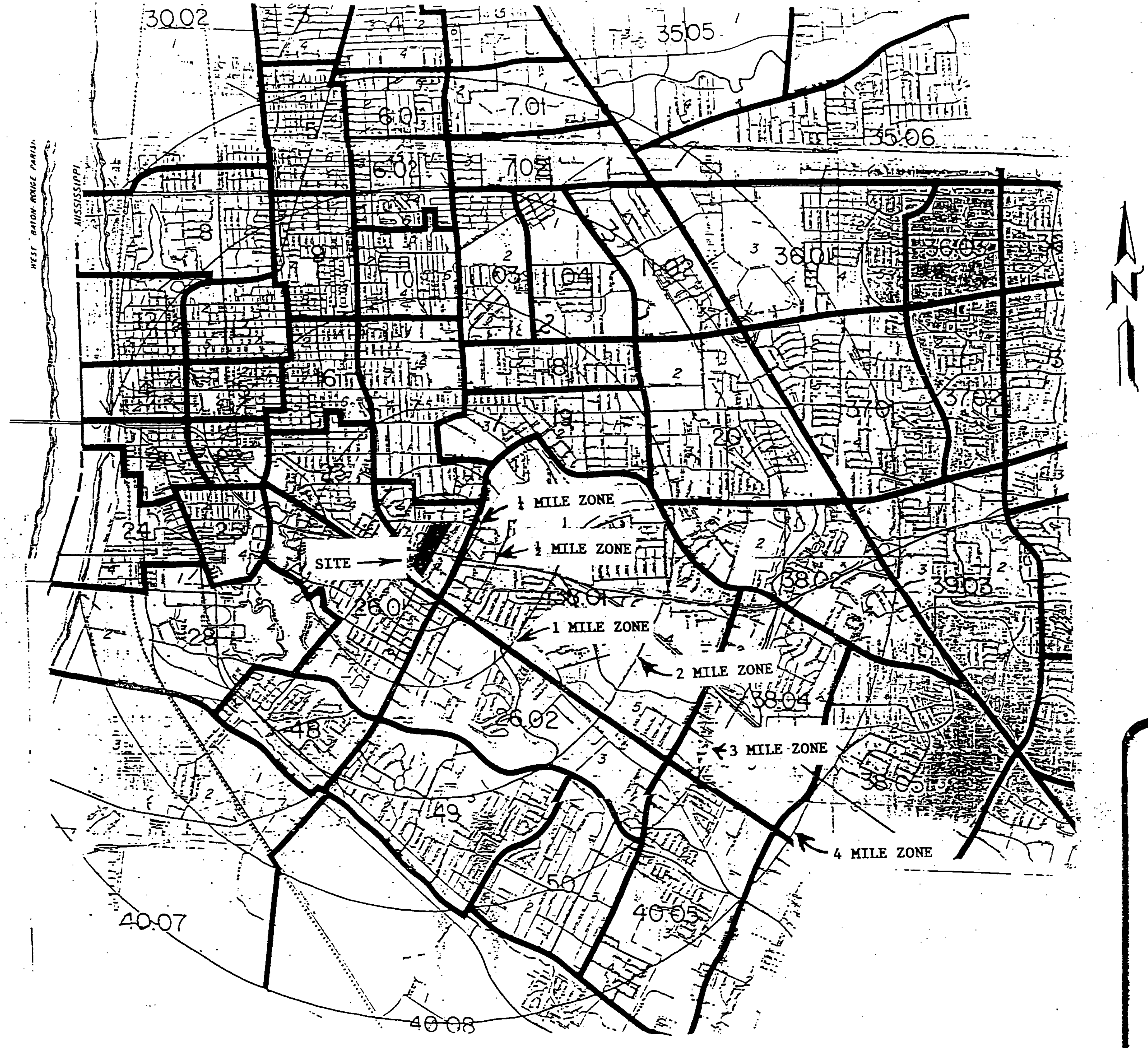
17

Valley Park – Planimeter Zone Counts vs. Total Counts							
Census Tract #	Planimeter Total Count	Proximity Zones Around Site					
		1/4 mi.	1/2 mi.	1 mi.	2 mi.	3 mi.	4 mi.
5	0120						91.6%
6.01	0080						100%
6.02	0115						100%
7.01	0120						67%
7.02	0125						100%
8	0250					16%	84%
9	0117					92%	8%
10	0120				20%	80%	
11.02	0182					55%	45%
11.03	0131					78%	22%
11.04	0145					94%	6%
12	0126					50%	50%
13	0085					100%	
14	0050					100%	
15	0052				39%	61%	
16	0100				98%	2%	
17	0210	2%	8%	27%	63%		
18	0100				77%	23%	
19	0170			23%	77%		
20	0300				4%	66%	30%
21	0070					100%	
22	0054				80%	20%	
23	0117		14%	42%	44%		
24	0150					100%	
25	0080				82%	18%	
26.01	0240		17%	44%	33%	6%	
26.02	0310		2%	21%	52%	25%	
27	0090	69%	30%	1%			
28	0295			4%	39%	53%	
36.01	0350						43%
37.01	0283						62%
38.01	0621	1%	6%	21%	46%	26%	
38.02	0280					52%	36%
38.04	0300					29%	67%
38.05	0440						11%
40.05	0343					5%	93%
40.07	*						35%
40.08	**						40%
48	0150				34%	67%	
49	0290				57%	43%	
50	0202					47%	53%

Note: 1. Total Count is planimeter unit count
2. Percentages are planimeter zone counts / total counts
* Estimated count is approximately 35% of total tract count in Zone 4
** Estimated count is approximately 40% of total tract count in Zone 4

Valley Park – Populations by Proximity							
Census Tract #	Total pop of tract	Radii					
		1/4 mi.	1/2 mi.	1 mi.	2 mi.	3 mi.	4 mi.
5	5,036						4,613
6.01	3,214						3,214
6.02	4,975						4,975
7.01	2,089						1,400
7.02	3,416						3,416
8	2,281					365	1,916
9	5,091					4,684	407
10	5,006				1,001	4,005	
11.02	2,709					1,490	1,219
11.03	2,625					2,048	577
11.04	3,489					3,280	209
12	975					488	487
13	1,722					1,722	
14	622					622	
15	2,946				1,149	1,797	
16	3,848				3,771	77	
17	5,089	102	407	1,374	3,206		
18	2,315				1,783	532	
19	2,567			590	1,977		
20	3,383				135	2,233	1,015
21	2,446					2,446	
22	2,113				1,690	423	
23	2,754		385	1,157	1,212		
24	2,765					2,765	
25	4,055				3,325	730	
26.01	3,689		628	1,623	1,217	221	
26.02	2,833		57	595	1,473	708	
27	2,374	1,638	712	24			
28	7,197			288	2,807	4,102	
36.01	3,039						1,307
37.01	5,546						3,439
38.01	4,747	47	285	997	2,184	1,234	
38.02	4,966					1,788	2,582
38.04	4,159					1,206	2,787
38.05	4,101						451
40.05	4,828					241	4,490
40.07	7,803						2,731
40.08	9,646						3,858
48	3,232				1,099	2,165	
49	4,931				2,811	2,120	
50	3,349					1,574	1,775
Totals	133,883	1,787	2,474	6,648	30,840	45,066	47,068

Note: A mechanical planimeter was used to determine by area the ratio of individual census tract protions to the total individual census tract for all census tracts within each radial zone (.25 mile to 4 mile) encompassing the Valley Park site.



LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

I A S DIVISION 5/20/92

VALLEY PARK SITE

BATON ROUGE, LOUISIANA

Proximity Zone Overlay
Over Population Census Tracts

1990 U. S. Census for East Baton Rouge by Census Tract

CENSUS TRACT	Total Population	White	% White	Black	% Black	Amer. Ind. Esk. & Aleut	Asian & Pacific Islander	Other Races
1.00	1682	402	23.90%	1261	74.97%	8	11	0
2.00	5807	3370	58.03%	2357	40.59%	22	53	5
3.00	2464	467	18.95%	1962	79.63%	3	31	1
4.00	2834	1461	51.55%	1347	47.53%	1	10	15
5.00	5036	454	9.02%	4569	90.73%	6	5	2
6.01	3214	807	25.11%	2384	74.18%	0	11	12
6.02	4975	354	7.12%	4581	92.08%	19	16	5
7.01	2089	868	41.55%	1181	56.53%	0	37	3
7.02	3416	718	21.02%	2639	77.25%	5	51	3
8.00	2281	296	12.98%	1975	86.58%	1	7	2
9.00	5091	64	1.26%	5025	98.70%	0	0	2
10.00	5006	159	3.18%	4837	96.62%	1	3	6
11.02	2709	1344	49.61%	1344	49.61%	2	9	10
11.03	2625	749	28.53%	1845	70.29%	8	10	13
11.04	3489	475	13.61%	2957	84.75%	2	51	4
12.00	975	630	64.62%	329	33.74%	5	7	4
13.00	1722	253	14.69%	1429	82.98%	0	39	1
14.00	622	286	45.98%	315	50.64%	4	13	4
15.00	2946	340	11.54%	2520	85.54%	3	78	5
16.00	3848	1751	45.50%	2053	53.35%	8	21	15
17.00	5089	3689	72.49%	1349	26.51%	4	34	13
18.00	2315	1982	85.62%	296	12.79%	4	18	15
19.00	2567	2515	97.97%	37	1.44%	5	6	4
20.00	3383	3300	97.55%	47	1.39%	3	25	8
21.00	2446	131	5.36%	2308	94.36%	3	3	1
22.00	2113	196	9.28%	1897	89.78%	2	9	9
23.00	2754	2678	97.24%	59	2.14%	4	9	4
24.00	2765	461	16.67%	2222	80.36%	4	63	15
25.00	4055	824	20.32%	2871	70.80%	4	330	26
26.01	3689	3458	93.74%	192	5.20%	4	24	11
26.02	2833	2452	86.55%	354	12.50%	3	19	5
27.00	2374	761	32.06%	1609	67.78%	0	1	3
28.00	7197	5537	76.93%	791	10.99%	11	797	61
30.01	6004	9	0.15%	5989	99.75%	5	1	0
30.02	679	51	7.51%	627	92.34%	0	1	0
30.99	2	2	100.00%	0	0.00%	0	0	0
31.01	5438	6	0.11%	5426	99.78%	1	3	2
31.02	3022	298	9.86%	2718	89.94%	3	1	2
32.01	3813	2843	74.56%	951	24.94%	2	14	3
32.02	3781	3002	79.40%	737	19.49%	12	26	4
33.00	4944	57	1.15%	4880	98.71%	2	1	4
34.00	7520	853	11.34%	6646	88.38%	3	17	1
35.01	2840	1137	40.04%	1613	56.80%	4	84	2
35.04	6618	717	10.83%	5875	88.77%	4	16	6

1990 U. S. Census for East Baton Rouge by Census Tract

CENSUS TRACT	Total Population	White	% White	Black	% Black	Amer. Ind. Esk. & Aleut	Asian & Pacific Islander	Other Races
35.05	4333	1997	46.09%	2279	52.60%	5	43	9
35.06	6410	5586	87.15%	775	12.09%	13	19	17
35.07	4710	3545	75.27%	1102	23.40%	3	53	7
36.01	3039	2733	89.93%	258	8.49%	3	32	13
36.03	2706	2418	89.36%	209	7.72%	23	39	17
36.04	5810	3795	65.32%	1671	28.76%	19	295	30
37.01	5546	5218	94.09%	214	3.86%	7	93	14
37.02	3335	3181	95.38%	118	3.54%	9	24	3
37.03	5960	5707	95.76%	128	2.15%	9	94	22
38.01	4747	3602	75.88%	1106	23.30%	2	24	13
38.02	4966	4575	92.13%	319	6.42%	7	55	10
38.04	4159	3900	93.77%	211	5.07%	1	31	16
38.05	4101	3789	92.39%	234	5.71%	8	59	11
39.03	6177	5331	86.30%	628	10.17%	16	147	55
39.04	5127	4279	83.46%	780	15.21%	9	40	19
39.05	8014	7410	92.46%	379	4.73%	13	191	21
39.06	6570	6059	92.22%	282	4.29%	8	198	23
40.03	7218	5764	79.86%	1245	17.25%	9	143	57
40.05	4828	1825	37.80%	2919	60.46%	2	65	17
40.06	5479	4719	86.13%	570	10.40%	9	165	16
40.07	7803	6807	87.24%	599	7.68%	18	256	123
40.08	9646	6061	62.83%	3162	32.78%	24	302	97
41.00	447	213	47.65%	232	51.90%	1	1	0
42.01	6313	2089	33.09%	4181	66.23%	15	20	8
42.02	9368	7373	78.70%	1940	20.71%	14	19	22
42.03	3899	1786	45.81%	2081	53.37%	15	8	9
43.01	5697	5468	95.98%	202	3.55%	14	11	2
43.02	5266	5164	98.06%	60	1.14%	18	15	9
44.01	4639	4537	97.80%	82	1.77%	4	15	1
44.02	4342	4149	95.56%	159	3.66%	11	13	10
44.03	5156	5029	97.54%	80	1.55%	9	17	21
45.02	7677	7020	91.44%	526	6.85%	28	78	25
45.03	6392	5823	91.10%	409	6.40%	3	95	57
45.04	5011	4745	94.69%	185	3.69%	7	60	14
45.05	4192	3968	94.66%	167	3.98%	10	36	11
45.06	10265	9854	96.00%	269	2.62%	27	99	16
46.01	8258	5914	71.62%	2303	27.89%	16	23	2
46.02	4954	3064	61.85%	1875	37.85%	2	10	3
47.00	4961	3259	65.69%	1686	33.99%	8	7	1
48.00	3232	2963	91.68%	100	3.09%	4	135	30
49.00	4931	4519	91.64%	104	2.11%	1	286	21
50.00	3349	3169	94.63%	95	2.84%	1	70	14
Totals	380105	240614	63.30%	132328	34.81%	615	5351	1197

REFERENCE NO.

18

March 26, 1991

M E M O R A N D U M

TO: Work File

FROM: Tom Mayhall
IAS Division

RE: Valley Park - SSI
Discussion with George Cardwell

On 3-12-91, I met with Mr. Cardwell the director of the Capital area ground water conservation commission. /the purpose of the meeting was to obtain information about ground water movement in the university sands, which are located just north of the 400 foot sand.

I presently have planned to take samples from the aquifer, it being the closest to the surface and possibly down flow from the valley park school. Information from technical report No. 49, pg 9 indicated the 400 foot sand flows in a north to south-south-west direction. Mr. Cardwell stated that the shallow sand and the university sands have not been well defined as far as water movement is concerned. That there is a close relationship with the university sand and the 400 foot sands as they are connected at the B fault. The Univ. sand and the 400 ft sand are joined at the fault by the university sand. Mr. Cardwell believed that the flow of the university sands most probably flows in the same direction as the 400 foot sands but could not say so definitely. He thinks a hydrological study would prove this by making a piezometric study which could be obtained from available data. He also states an increase in pumping from the livingston parish area could be affecting the natural ground water movement. He stated much is known about water movement north of the fault but not south of the fault. He also stated the fault acts as an aquitard restricting movement in most of the aquifers. He also agreed the background sample location was a best choice in liew of a piezometric study.

Reference:

1) DOTD, Water Resources Technical Report No. 19, pg. 6

2) DOTD, " " " " " 49, pg 48

REFERENCE NO.

19

TELEPHONE COMMUNICATION RECORD

Staff person: Tom Mayhall TM   Date: MARCH 26, 1991

Talked to: KIM MITCHELL, ENDANFERED SPECIES COORDINATOR

Company: US FISH & WILDLIFE   cc:

Site: VALLEY PARK

Subject: DETERMINE SENSITIVE ENIRONMENT ON 15 MI PATHWAY

Comments made: THERE ARE NO LISTED AREAS

REFERENCE NO.

20

TELEPHONE COMMUNICATION RECORD

Staff person: Tom Mayhall TM

Date: MARCH 26, 1991

Talked to: RICH MARTIN
ZOOLOGIST

Company: LA WILDLIFE & FISHERIES

Site: VALLEY PARK

Subject: DETERMINE LISTED SENSITIVE ENVIRONMENT IN 15 MILE MIGRATION PATHWAY

Comments made: NO SENSATIVE ENVIRONMENT OR OTHER RELATED AREA EXISTS ALONG THE PATHWAY

REFERENCE NO.

21

TELEPHONE COMMUNICATION RECORD

Staff person: Tom Mayhall Jm

Date: 3-26-91

Talked to: KATHY LEBLANC

Company: BATON ROUGE WATER WORKS

Site: VALLEY PARK

Subject: WATER INTAKES

Comments made: THERE ARE NO WATER INTAKES ALONG THE 15 MILE MIGRATION PATHWAY FOR DRINKING WATER.

REFERENCE NO.

22

March 26, 1991

M E M O R A N D U M

TO: File

FROM: Tom Mayhall TM
IAS Division

RE: Valley Park

On 1-15-90, myself and Mr. Roger Ray of the IAS division, met with Mr. Peter Davidson a utilities engineer with LSU. Mr. Davidson confirmed the existence of three active water wells that are identified to sample in the Valley Park SSI Workplan. Mr. Davidson gave permission to sample the wells. The well NOS. are no. 302439091111801 at the football practive field, 302434091103001 at the systems bldg. and 30245609110301 at Acadian Dormitory.

REFERENCE NO.

23

March 26, 1991

M E M O R A N D U M

TO: Work File

FROM: Tom Mayhall
IAS Division

RE: Valley Park

Talked to (b) (6) [redacted] of (b) (6) [redacted] at (b) (6) [redacted] call sat afternoon. His plane gets in 2pm. will be in office mon & tues
Permission granted by (b) (6) [redacted] on 2-7-91.

Talked to (b) (6) [redacted] of (b) (6) [redacted]. at (b) (6) [redacted]. She'll talk to husband. Call back. (b) (6) [redacted] gave permission to sample her well.

REFERENCE NO.

24

April 2, 1992

M E M O R A N D U M

To: File

From: Tom Mayhall, EQSI
IAS Division

Re: Valley Park School (SSI)
(Gain Site Access)

Permission to collect field samples for the SSI was granted from Charles Law with the EBRP School Board.